RECORDS CODE SHEET
5ND 4535 (Rev. 1-62)

NAVAL AVIATION SAFETY CENTER

GENERAL (Card No. 1)

Item	Entry	Columns
Bureau Number	1 3 1 4 4 1	16-21
Reporting Custodian	4 4 2	22-24
Type of Duty	2 2	25-26
Major Command	2	27
Aircraft Damage	A	28
Aircraft Injury	A	29
Maneuver prior to Accident	R	30
First Accident type	B 2	31-32
First Accident phase	6 3	33-35
Second Accident type		36-37
Second Accident phase		38-40
Type of Operation	3 5 2	41-42
Contributing Cause Factors	F 1	43-47
Pilot Factor, First	X T	48-49
Pilot Factor, Second	A 5	50-51
Pilot Factor, Third	V 7	52-53
First other Personnel Factor		54-55
Second other Personnel Factor		56-57
Primary Major Material Factor	P	58
Secondard Major Material Factor		59
Design		60
Facilities		61
Special Data & Cond.	3 G B M D	62-68
Type of Flight Hazard		69
Pri. Cause/~~Avoidable Inc. or Flt Haz or Gr Acd't~~	1	70
Causal Fac for Pri-Cause	A 5	71-72
Carrier Hull Number		73-74
No Personnel Card ("R")		80

SUPPLEMENTARY (Card No. 2)

Item	Entry	Columns
Weather		16-21
Kind of Flight	1 A 1	22-24
Relative Wind - Direction	X	25
Relative Wind - Velocity	1	26
Relative Wind (Old Code - Not in Use)		27
Clearance	2	28
Time of Day	2	29
Number of other Aircraft		30
Altitude of Occurrence	Ø Ø 3	33-35
POSSIBLE FACTORS: Contributing Cause Factors	2 3	36-37
POSSIBLE FACTORS: Pilot Factor		38-39
POSSIBLE FACTORS: Other Personnel Factor	A 2	41-42
POSSIBLE FACTORS: Major Material Factor	A	43
POSSIBLE FACTORS: Design		44
POSSIBLE FACTORS: Facilities		45
POSSIBLE FACTORS: Weather		46
Non-Navy Injury ("R")		47
Number of "A" or "L" or "M" Injury	Ø 6	48-49
Number of "B" Injury		50-51
Number of "C" Injury		52-53
Number of "D" Injury		54-55
Number of "E" Injury		56-57
Location	4/4 /1/ A 5 G L N C O	62-68
Facility Data	Q	69-74

ACCIDENT DAMAGE A (9)

ACCIDENT INJURY A (10)

FISCAL YEAR 3 (75)

	Don't Count		Enemy Action			Other Aircraft		
I.D. NO.		2	Ø	7	2	3	1	Ø 4
		1 YR	2 MO	3	4 DAY	5	6 TYP	7 8 SEQ

Model					
P	2	Y	5	F	S
11	12	13	14	15	

SPECIAL ATTN: ("X")

Model Code 5 3 (76 77)

IBM: The above Fields are to be punched in all Coded Code

PERSONNEL STATISTICS (Card No. 3)

File Number → (b) (6) [redacted]

	Name (16-21)	Rank/Rate	Br Service	Age	Yrs Experience	Status	Position	Inj to Ind	Abandon A/C	Pilot Factor Involved	Trainer Utilization	Instr. Card	Total Time All Models	All Models 3 Months	All Series This Model	All Ser Mod 3 Months	CV Landings	Instrument Hours	Nite Hours	Total Time Jet or Helo
03	B R O U G H T O N	4	1	A	7	E	1	A	1	1	/ 2	2	3 Ø	1 Ø	4 1	1 Ø		2 6	1 6	—
	22 23 24 25 26 27 28 29 30 31	32	35	37	40	42	45	47	49	51	52-53	55	56-57	58-59	62-63	65-66	68	69-70	71-72	73-74
04	M C H U G H P R	4	1	A	5	Y	2	A	1	3	Ø Ø	2	1 6	1 4	9 9	1 4		3 5	2 4	—

Name 16 17 18 19 20 21

File Number → (b) (6) [redacted]

IBM: PERSONNEL CODED ON REVERSE SIDE ☐

CODED DJ REVIEWED [illegible] LOGGED LD PUNCHED LD VERIFIED ______ REVIEWED [illegible] REPUNCHED ______

CODE SHEET REVIEWED BY CLASS DESK ANALYST [illegible] (Initials) 10/10/62 (Date)

NO. 1962

FILM/PLAT COVERAGE

Reporting Custodian VP-16

Type of Report AAR Serial No. 1-62

Date of Occurrence 7-23-62 Acft Model P2V-5FS 131441

Type of Film Coverage MAGNETIC TAPE OF CREW CONVERSATION No. of Reels 2

TECH. LIB.

NASC Reel ID No. 11

NOTES: 1. This film coverage may be obtained from the NASC Tech. Library for viewing.

2. When microfilming this report, film this page immediately after the code sheet.

A&R DEPARTMENT CODE SHEET

☐ Don't Count

☐ Other Aircraft

75	76	77	78	79
3	5	3	6	2

Year	Month	Day	Type Occurrence Sequence	Damage	Injury	Model Aircraft
2	0	7	2 3 1 0 4	A	A	P2V5FS

Bureau Number: 131441

NARRATIVE BRIEF

PARTIAL PWR LOSS/FIRE STBD RECIP ENG W/O 4TH GCA APPR. LOW PASS. AT 250 FT LEVEL FLT PORT PROP FEATHERED. A/C CLIP/TREES/GROUND CONTROLLED - BURNED. PILOT FACTOR - FEATHERED PORT PROP VICE STBD.

Prepared by J.C.M. Reviewed

Note to IBM: Route code sheet to Open File upon completion of Brief Cards

Punched D SEP 10 1962 Verified

U. S. NAVAL AVIATION SAFETY CENTER
U. S. NAVAL AIR STATION
NORFOLK 11, VIRGINIA

NASC:12:ees
Ser: 2657
13 December 1962

SPECIAL HANDLING REQUIRED IAW OPNAVINST P3750.6 SERIES

From: Commander, U. S. Naval Aviation Safety Center
To: Commanding Officer, Patrol Squadron ONE SIX

Subj: VP-16 AAR ser 1-62 concerning SP-2E (P2V-5FS), BuNo 131441, accident occurring 23 July 1962, pilot McHUGH

1. The subject report and all endorsements thereon have been reviewed. The Naval Aviation Safety Center concurs with the comments and recommendations of the Aircraft Accident Board as modified by subsequent endorsers.

2. The cause of this accident has been recorded by the Center indicating the pilot as the primary factor and material failure/malfunction as a contributing factor.

(b) (6)
Chief of Staff

Copy to:
BUWEPS (F-13) (2)
COMFAIRWINGSLANT
COMFAIRWING 11
CO, NAS GLYNCO
BUWEPSREP BURBANK
BUWEPSREP WOODRIDGE
CO, VP-5, 7, 8, 10, 11, 18, 21, 23, 24, 26, 30, 44, 56
COMNAVAIRLANT
COMFAIRWING 3

4

CNAL 30S
Ser: 9702

19 SEP 1962

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 70, OPNAVINST 3750.6D

FOURTH ENDORSEMENT on VP-16 AAR ser 1-62, P2V-5FS, 131441, accident occurring 23 July 1962, pilot McHUGH

From: Commander Naval Air Force, U.S. Atlantic Fleet
To: Commander, U.S. Naval Aviation Safety Center

Subj: Aircraft Accident Report

1. Forwarded, concurring in the comments and recommendations of the Aircraft Accident Board as modified by subsequent endorsers.

2. The comments of the third endorser regarding the use of jet engines is fully concurred in. Commander Naval Air Force, U.S. Atlantic Fleet will submit a recommended change to the P2V-5FS/7 NATOPS Manual concerning this subject.

(b) (6) [redacted]

By direction

Copy to:
BUWEPS (C-131)
COMFAIRWINGSLANT
COMFAIRWING ELEVEN
CO, NAS GLYNCO
BUWEPSREP BURBANK
BUWEPSREP WOODRIDGE
CO, VP-5, 7, 8, 10, 11, 16, 18, 21, 23, 24, 26, 30, 44, 56

5

ORIGINAL

CFAWL/3750
Ser: 312/1164
12 SEP 1962

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 70, OPNAVINST 3750.6D

THIRD ENDORSEMENT on VP-16 AAR serial 1-62 concerning P2V-5FS, BUNO 131441, accident occurring 23 July 1962, Pilot McHUGH

From: Commander Fleet Air Wings, U. S. Atlantic Fleet
To: Commander, U. S. Naval Aviation Safety Center
Via: Commander Naval Air Force, U. S. Atlantic Fleet

Subj: Patrol Squadron SIXTEEN AAR 1-62

1. Forwarded, concurring with the comments and recommendations of the board and subsequent endorsements, except as indicated in paragraph 3 below.

2. COMFAIRWINGSLANT considers the practice of placing the jet engines in idle particularly important on all actual or simulated instrument approaches, all approaches and landings conducted at gross weights in excess of single engine limits and when a reciprocating engine malfunction is known or suspected to exist. Use of the jets on normal landings should be dependent upon runway foreign object damage hazard.

3. Paragraph 1.b.(1) of the second endorsement is not concurred in. While separation of feathering buttons has merit, it is not considered that this is the final solution to eliminating inadvertent feathering in multi-engine aircraft. Past experience has shown this error usually results from too hasty action on the part of the pilot or from lack of cockpit discipline. The action required to eliminate this problem, as with any flight problem stemming from personnel error, is that of recognizing and accepting the need for constant individual and crew familiarization with emergency procedures and the absolute requirement for cockpit discipline in multi-engine aircraft. The attainment of these objectives is the responsibility of each commanding officer, pilot and individual crew member, and only with their attainment can correct positive reaction to emergency situations in aircraft be assured.

Geo. P. Koch

GEO. P. KOCH

Copy to:
CO, VP-16
BUWEPS
COMNAVAVNSAFECEN (2)
CO NAS GLYNCO GEORGIA
RIC, WOODRIDGE, N. J.
BUWEPS REP BURBANK

6

FF12/1-11/302:v1
3750
Ser 555
AUG 31 1962

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 70 OPNAV INST 3750.6D

SECOND ENDORSEMENT on PATRON SIXTEEN AAR ser 1-62 concerning P2V-5FS BUNO 131441 accident occurring 23 July 1962, Pilot McHUGH

From: Commander Fleet Air Wing ELEVEN
To: Commander Naval Aviation Safety Center
Via: (1) Commander Fleet Air Wings, U. S. Atlantic Fleet
(2) Commander Naval Air Force, U. S. Atlantic Fleet

Subj: Patrol Squadron SIXTEEN AAR 1-62; forwarding of

Ref: (a) COMNAVAIRLANT msg 291405Z AUG
(b) COMFAIRWINGSLANT msg 301636Z AUG

1. Forwarded, concurring with the comments and recommendations of the basic report and 1st endorsement subject to the following comments:

a. Part X - Recommendation. The basic concept of the recommendation for revising the P2V NATOPS Manual to require that jet engines be placed in idle or standby for instrument low approaches is concurred in. Reference (a) as interpreted by reference (b) provides for jet engines to be operating at idle for all landing approaches including low passes where a wave-off is anticipated; however, this practice should be extended to include all low altitude situations where the loss of a reciprocating engine could develope into a critical situation. It should be noted that the thrust developed by idling jet engines, while small in amount, will necessitate the use of slightly different power settings throughout an instrument approach. By requiring the jet engines to be in idle during practice instrument approaches, the procedure will conform to the requirements for actual instrument approaches as set forth in the NATOPS Manual. It is therefore recommended that the jet engines be operated in idle for all instrument approaches, and that the jet engine be in idle or standby, at the discretion of the pilot, during all other low altitude operations.

b. Enclosure 19 of enclosure 22. Recommendation of Medical Officer.

(1) Recommendation 2. Concur with the recommendation to physically separate the feathering buttons; however, a separation of more than one to two inches should be made. It is recommended that the feathering buttons be relocated, one on either side of the pilot's overhead switch panel.

c. It is noted that the remarks section of the AAR does not include information required by COMNAVAIRLANT NOTE 3750 of 31 JAN 1962. It has been determined that:

FF12/1-11/302:v1
3750

(1) No NATOPS requirement or procedure was a factor to the accident.

(2) The NATOPS Manual was being complied with.

(3) The accident does indicate the need for a change to the P2V-5FS/7 NATOPS Manual indicated in paragraph 1.a. above.

G. J. Frauenheim

G. J. FRAUENHEIM

Copy to:
CO VP-16
BUWEPS
COMNAVAVNSAFECEN
CO NAS GLYNCO
BUWEPS REP, BURBANK
RIC, WOODBRIDGE,NJ.

8

FF12/VP-16/20:ldw
3750
Ser 399
17 AUG 1962

FIRST ENDORSEMENT on PATRON SIXTEEN AAR 1-62, P2V-5FS BuNo 131441, 23 July 1962, of 15 Aug 1962

From: Commanding Officer, Patrol Squadron SIXTEEN (VP-16)
c/o Fleet Post Office, New York, New York
To: Commander, Naval Aviation Safety Center
Via: (1) Commander, Fleet Air Wing ELEVEN
(2) Commander Fleet Air Wings, Atlantic Fleet
(3) Commander Naval Air Force, U.S. Atlantic Fleet

Subj: Patrol Squadron SIXTEEN AAR 1-62; forwarding of

1. Forwarded, concurring with the comments and recommendation of the board.

2. This command will initiate correspondence recommending a change to the P2V NATOPS Manual which will require jets to be in standby or idle for all simulated instrument approaches which do not involve a landing.

3. Neither pilot had been involved in previous aircraft accidents according to the records of this command. LT McHUGH, the pilot in command, was an experienced Patrol Plane Commander, qualified as an instructor and test pilot in P2V-5FS model aircraft and well experienced in aircraft emergency procedures. LT BROUGHTON was an experienced naval aviator who was making normal progress in transitioning from rotary wing to fixed wing type aircraft after completing training in Patrol Squadron THIRTY. He had not experienced any known difficulty since reporting on board in December 1961.

C E Rodgers

C. E. RODGERS

Copy to:
BUWEPS
COMNAVAIRLANT
COMFAIRWINGSLANT
COMNAVAVNSAFECEN (2)
CO NAS GLYNCO
BUWEPS REP, BURBANK
RIC, WOODRIDGE, N.J.

9

ORIGINAL

ORIGINAL

AIRCRAFT ACCIDENT REPORT
OPNAV FORM 3750-1 (Rev. 12-59) PAGE 1

SPECIAL HANDLING REQUIRED *in accordance with Para. 65, OPNAV INSTRUCTION 3750.6C*

OPNAV REPORT 3750-1

PART I - GENERAL

SECTION A - IDENTIFICATION

1. A/C ACCIDENT BOARD APPOINTED BY: Commanding Officer, VP-16	2. DATE OF ACCIDENT: 23 July 1962	TIME (LZT): 1044(R)	3. SERIAL NUMBER: 1-62
4. TO: Commander, Naval Aviation Safety Center	5. ENCLOSURES: (1) Wreckage Distribution Dia		
6. VIA: (1) Commanding Officer, VP-16	(2) Transcript of Magnetic Tape		
(2) COMFAIRWING ELEVEN	(3) Magnetic Tape (Original only)		
(3) COMFAIRWINGSLANT	(4) Sequence of events diagram		
(4) COMNAVAIRLANT	(5) Witnesses' Statements		
(5)	(6) Photo of PORT Prop		
(6)	(7) Photo of STBD Prop		
	(8) Photo of PORT Fuel Valves		
	(9) Photo of STBD Fuel Valves		
7. REPORTING CUSTODIAN *(if different from item 1. above)*: SAME	8. ACTIVITY OPERATING A/C *(if different than item 7.)*: SAME		
9. KIND OF FLIGHT: 1A1	10. TIME OF DAY: ☐ DAWN ☒ DAY ☐ DUSK ☐ NIGHT	11. LOCATION OF ACCIDENT: 2530/3 MI NAS Glynco Tower	12. ELEVATION ABOVE SEA LEVEL: 25 Ft.
13. PLACE OF LAST TAKE-OFF: NAS Jacksonville, Florida	14. CLEARED: FROM NAS Jacksonville TO NAS Jacksonville		

15. TYPE CLEARANCE: ☐ IFR ☒ VFR ☐ DVFR ☒ LOCAL ☐ OPERATIONAL ☐ AIRWAYS ☐ DIRECT ☐ OTHER *(Specify)*

16. TIME IN FLIGHT	17. TYPE ACCIDENT	18. PHASE OF FLIGHT
2 Hrs. 9 min	B 2 Collision Ground(Controlled)	6. Wave Off (Practice GCA Low Pass)

A/C

19. MODEL	20. SERIAL NO.	21. DAMAGE TO A/C	22. DOLLAR COST	23. AIRSPEED (Kts.)	24. A/C WEIGHT
P2V-5FS	131401	☒ A ☐ B ☐ C ☐ D ☐ E ☐ F	1,222,000	Unknown	64,746

25. LIST MODEL, SER.NR, REPORTING CUSTODIAN AND DAMAGE CLASSIFICATION OF ANY OTHER A/C INVOLVED *(Complete an OPNAV FORM 3750-1 for each A/C involved)*: None

1. NAME (Last, first and middle initials)	2. RANK RATE	FILE SER. NO.	DESIG. NATOR	BRANCH OR SERVICE	3. AGE	4. YRS OF EXP. DNA	5. BILLET	6. POSITION	7. INJURY CODE
PILOT (at controls at time of accident) BROUGHTON, James A.	LT	(b) (6)	1310	USN	29	7	Student	Left Seat	A
CO-PILOT McHUGH, Philip R.	LT	(b) (6)	1310	USN	29	5	PPC	Right Seat	A

SECTION B - PERSONNEL DATA

PERSONNEL		8. OFT - OPERATIONAL FLIGHT TRAINER AVAILABLE	8. OFT - OPERATIONAL FLIGHT TRAINER USED	9. CPT - COCKPIT PROC. TRAINER AVAILABLE	9. CPT - COCKPIT PROC. TRAINER USED	10. UNIT TO WHICH PERSONNEL ARE ATTACHED	11. TYPE INSTRUMENT CARD
PILOT	YES	X	X				
	NO			X	X	VP-16	☒ STANDARD ☐ SPECIAL
CO-PILOT	YES	X					
	NO		X	X	X	VP-16	☒ STANDARD ☐ SPECIAL

PILOT EXPERIENCE IN HOURS

12. ITEM		PILOT	CO-PILOT
ALL MODELS		3058.6	1612.3
ALL MODELS IN LAST 12 MONTHS		344.4	593.5
ALL MODELS IN LAST 3 MONTHS		102.2	149.0
ALL SERIES THIS MODEL *(item 19)*	A/C	418.6	1117.2
	OFT / CPT	12.0/0	0/0
ALL SERIES THIS MODEL LAST 12 MONTHS	A/C	344.4	591.5
	OFT / CPT	12.0/0	0/0
ALL SERIES THIS MODEL LAST 3 MONTHS	A/C	102.2	149.0
	OFT / CPT	0/0	0/0

ITEM		PILOT	CO-PILOT
CV LANDINGS DAY/NIGHT		6/0 548 helo	6/0
FCLP LANDINGS DAY/NIGHT		79/0	108/0
INSTRUMENT HOURS LAST 3 MONTHS		25.5	35.0
NIGHT HOURS LAST 3 MONTHS		15.7	24.4
TOTAL HELO. HRS. *(Helo. AAR Only)*		NA	NA
TOTAL JET HOURS *(Jet AAR Only)*		NA	NA
LAST FLIGHT, ALL SERIES THIS MODEL	DATE	20Jul62	19Jul62
	DURATION	6.1	7.0

OTHER PERS.

13. NAME (Last, first and middle initials)	DNA	RANK RATE	FILE/SERVICE NO.	ORG. TO WHICH ATTACHED	INJURY CODE	BILLET	POSITION
1. ANDERSON, Ronald W.		ADR3	(b) (6)	VP-16	A	P Capt	Flt Dk.
2. CAWTHON, James V.		ATCA		" "	A	Radio	Radio
3. MOSELER, Kenneth J.		AE2		" "	A	Elect	Flt Dk
4. WILLIS, Harry C.		ADR3		" "	A	2Mech	Radio
5.							

OPNAV FORM 3750-1 (Rev 12-59) | AIRCRAFT ACCIDENT REPORT | OPNAV REPORT 3750-1

PAC 7

C. WEATHER

1. CEILING	2. VISIBILITY	3. RELATIVE WIND (SEE INST'S) *	4. TEMPERATURE OAT	DEW POINT	6. ALTIMETER SETTING
E 2,000	7	000 REL / 6 KTS	88°F	77°F	30.05

7. OTHER WEATHER CONDITIONS *(winds aloft, icing levels, sea state, etc.. if pertinent to accident)*

NA

D. CONTRIBUTING FACTORS

✓	FACTOR	✓	FACTOR	✓	FACTOR
X	PILOT		LANDING SIGNAL OFFICER	X	MATERIAL FAILURE OR MALFUNCTION
X	CREW		OTHER PERSONNEL *(Specify)*		DESIGN
	SUPERVISORY PERSONNEL		ADMINISTRATIVE		ROLLING AND PITCHING DECK/ ROUGH SEAS
	MAINTENANCE PERSONNEL		AIRPORT OR CARRIER FACILITIES		UNDETERMINED
	SERVICING PERSONNEL		WEATHER		OTHER *(Specify)*

E. DEPLOYMENT

FOR ACCIDENTS ABOARD DEPLOYED CARRIER *(Complete following Section on Pilot)*

1. DATE DEPLOYED	2. DAY - HOURS/LANDINGS LOGGED SINCE DEPLOYED	3. DAY - HOURS/LANDINGS LOGGED LAST 30 DAYS
NA	NA	NA
4. INSTRUMENT HRS. LOGGED SINCE DEPLOYMENT	**5. NIGHT - HOURS/LANDINGS LOGGED SINCE DEPLOYED**	**6. NIGHT - HOURS/LANDINGS LOGGED LAST 30 DAYS**
NA	NA	NA

PART II - MAINTENANCE, MATERIAL AND FACILITIES DATA

SECTION A - AIRCRAFT AND ENGINE DATA

1. A/C HISTORY

DATE OF MANUFACTURE	SERVICE TOUR	MONTHS IN THIS TOUR	TOTAL NO. OF OVERHAULS	FLIGHT HRS. SINCE LAST OVERHAUL	FLIGHT HRS. SINCE ACCEPTANCE	TYPE CHECK LAST PERFORMED	FLIGHT HOURS SINCE LAST CHECK	NO. OF DAYS SINCE LAST CHECK
26 FEB 1951	3	22	3	1316.0	4574.4	3 CAL MAJOR	14.1	7

2. ENGINE HISTORY

	DATE OF MANUFACTURE	ENGINE MODEL	ENGINE SERIAL NO	TOTAL NO. OF OVERHAULS	FLIGHT HRS. SINCE LAST OVERHAUL	FLIGHT HRS. SINCE ACCEPTANCE	TYPE CHECK LAST PERFORMED	FLIGHT HOURS SINCE LAST CHECK	NO. OF DAYS SINCE LAST CHECK
P	25 SEPT 1955	R3350-36WA	W563482	4	493.0	3493.0	3 CAL MAJOR	14.1	7
S	28 DEC 1952	R3350-36WA	562840	5	876.7	3236.6	3 CAL MAJOR	14.1	7
P	29 AUG 1951	J34WE 34	WE200655	2	231.7	940.6	3 CAL MAJOR	1.3	7
S	29 JUL 1952	J34WE 34	WE201614	3	87.4	504.7	3 CAL MAJOR	1.3	7

3. GENERAL

a. DID FIRE OCCUR? ☐ BEFORE ACCIDENT ☒ AFTER ACCIDENT ☐ DID NOT OCCUR

b. DID EXPLOSION OCCUR IN FLIGHT? ☐ YES ☒ NO

c. CHECK IF APPLICABLE ☒ AMP FUR SERIAL See Part III

d. HAS DIR BEEN REQUESTED? ☒ YES ☐ NO

e. FAILED COMPONENTS INVOLVED See Part III

4. MAINT. AND ENG. FACTORS

CHECK ITEMS PRESENT IN THIS ACCIDENT

a. ☐ A/C DESIGN
b. ☐ A/C EQUIPMENT
c. ☐ MAINTENANCE
d. ☐ UNDETERMINED
e. ☐ TECHNICAL INSTRUCTION
f. ☐ OTHER *(Specify)* ----------
g. ☐ SURFACE FACILITIES
h. ☐ HUMAN ENGINEERING *(e.g., Cockpit configurations, etc.)*

5. OTHER DATA

a. ALTITUDE AT MALFUNCTION	b. AIR SPEED	c. OPERATING TEMP	d. WEIGHT OF A/C	e. C.G. (% MAC)	f. KIND OF FUEL	g. FUEL PRESSURE
250	UNKNOWN Kts.	UNKNOWN	64,746	30.4	115/145	UNKNOWN

h. EVIDENCE OF FUEL CONTAMINATION: NONE

i. CAUSE OF ENGINE FAILURE OR FLAMEOUT: UNDETERMINED

j. FUEL CONTROL REGULATOR/CARBURETOR *(List stock and ser. nos., give time since new or overhauled)*: See Part III

k. EXTERNAL STORES ABOARD A/C: NONE

(If additional space is necessary, attach additional sheets)

* Relates to take off/landing direction

11

AIRCRAFT ACCIDENT REPORT

PART II - MAINTENANCE, MATERIAL AND FACILITIES DATA (Cont'd)

1 GENERAL - √ BASIC FACILITIES INVOLVED. DESCRIBE EFFECT ON ACCIDENT IN THE ANALYSIS SECTION OF THE REPORT

	a. CLEARANCE AUTHORITY		i. WATER LANDING AREA		q. CRASH AND RESCUE
	b. FLIGHT PLANNING INFORMATION SOURCE		j. APPROACH ZONE		r. SEARCH AND RESCUE
	c. LANDING AIDS (GCA, CCA, ILS, etc.)		k. END ZONE (*Over run*)		s. CATAPULT
	d. TRAFFIC CONTROL TOWER (*Field or Ship*)		l. SHOULDERS		t. ARRESTING GEAR (*Carrier*)
	e. APPROACH AND ENROUTE AIDS TO NAVIGATION		m. TAXIWAY		u. BARRIER OR BARRICADE (*Field or Ship*)
	f. RUNWAY WATCH		n. PARKING AREA		v. FLIGHT DECK
	g. LANDING SIGNAL OFFICER		o. EMERGENCY ARRESTING GEAR (*Runway*)		w. MIRROR
	h. RUNWAY		p. A/C SERVICING, HANDLING AND DIRECTING (*Field or Ship*)		x. OTHER (*Specify*)

SECTION B - FACILITIES DATA

2 SHIPS DATA

a. EQUIPMENT INVOLVED: ☐ CATAPULT ☐ ARRESTING GEAR

b. PRESSURE SETTINGS	c. WIND OVER DECK	d. RELATIVE HEADWIND	e. APPROACH SPEED (SPN-12 READING)
NA	NA	N A	N A

f. MARK NUMBER	g. MODEL NUMBER	h. LOCATION ON SHIP	i. LAUNCHING BRIDLE AND CONFIGURATION USED
NA	NA	NA	NA

j. CATAPULT / ARRESTING GEAR BULLETINS OR NOMOGRAMS USED

NA

K. THIS PORTION SHALL BE COMPLETED WHENEVER (1) A MAJOR AIRCRAFT ACCIDENT INVOLVES ARRESTING GEAR, BARRIER AND/OR BARRICADE EQUIPMENT, OR (2) AN AIRCRAFT ACCIDENT INVOLVES MALFUNCTIONING OF ARRESTING GEAR, BARRIER AND/OR BARRICADE EQUIPMENT. MINOR ACCIDENTS OR ROUTINE DAMAGE TO CABLES, WELDINGS AND OTHER EXPENDABLE COMPONENTS NEED NOT BE REPORTED.

ENGAGED	DECK RUNOUT (FT)	RAM TRAVEL (IN.)	CONTROL VALVE SETTINGS: CONSTANT PRESSURE DOME (P.S.I.)	CONSTANT PRESSURE RATIO	CONSTANT PUSH-OUT (WT. LBS.)	ACCUMULATOR PRESSURE (PSI)	COMMENTS (*For cable failure specify number of landings and months in service*)
DECK PENDANT							
DECK PENDANT							
BARRIER				NA			
BARRIER							
BARRICADE							

PART	SECTION	ITEM	PART III REMARKS (*Continue on additional sheets*)
11	3	C&E	PORT / STARBOARD RECIP. ENG 785 / RECIP. ENG 786 PROP 787 / PROP 788 JET 789 / JET 790 GOVERNOR 791 / OIL COOLER 767 OIL COOLER 768
11	5	J	PORT CARB P/N49300-A1 S/N525B183 HRS 981.0 STBD CARB P/N49300-A1 S/N525F206 HRS 88.4 PORT JET FUEL CONTROL P/N22E784-9 S/N SECQ-52 HRS 46.1 STBD JET FUEL CONTROL P/N B580501 S/N 5996A HRS 74.8
See Add'l Sheet.			

COST DAMAGE TO: GOVERNMENT PROPERTY $ NONE — PRIVATE PROPERTY UNDETERMINED

DATE SUBMITTED TO C. O. 15 August 1962

COPY DISTRIBUTION
20CC, NAVAVNSAFECEN DIRECT
10CC, BUWEPS DIRECT
BUWEPSREP BURBANK
RIC WOODRIDGE, N. J.
CONNAVAIRLANT DIRECT
COMFAIRWINGSLANT DIR.
NAS GLYNCO
COMFAIRWING THREE
ALL VP (P2V) RONSLANT

PART IV - SIGNATURES OF THE BOARD

SENIOR MEMBER: (b) (6) Operations Officer — UNIT BILLET: FAW-11 FLIGHT

(b) (6) ØDR, USN

(b) (6) (b) [redacted] LT, USN (MC) SURGEON

(b) (6) [redacted] COMMUNICATIONS OFFICER

(b) (6) [redacted] LT, USN

(b) (6) [redacted] LT, USN — UNIT BILLET

(b) (6) [redacted] S*T MAINT OFFICER — UNIT BILLET

(b) (6) [redacted] AVIATION SAFETY OFFICER — UNIT BILLET

12

PART V THE ACCIDENT

On 23 July 1962 P2V-5F BUNO 131441 received take off instructions from the control tower, NAS Jacksonville, Florida, and took off at 0835 EST with a crew of six on board. The aircraft had a fuel load of 2300 gallons, with a gross weight of 68,676 pounds. The flight was scheduled as a 6.0 hour local flight on Patrol Squadron SIXTEEN (VP-16) flight schedule for 23 July 1962. The mission as scheduled was to be Instrument 7 (GCA) from the COMFAIRWINGSLANT flight training syllabus. A concurrent mission was to have been an operational and functional check of equipment and systems prior to transfer for induction into the PAR program on 8 August 1962. This was to be done throughout the entire flight and no specific time assigned for this purpose. A pre-transfer flight test sheet was issued to the pilots by the Squadron Quality Control Officer prior to taxi.

After approximately one hour and fifteen minutes of flight the aircraft commenced practice GCA approaches to low passes, in VFR conditions, to runway 25 at NAS Glynco, Brunswick, Georgia. The first three practice approaches were normal in all respects. The fourth approach was a no gyro approach to GCA minimums (100 feet and one quarter mile), and low pass. After the aircraft executed a wave off from this approach witnesses in the vicinity of the airfield observed smoke trailing from the starboard reciprocating engine. The aircraft proceeded down runway 25 at approximately 250 feet of altitude in level flight. Shortly after the aircraft passed the upwind end of the runway a control tower operator, using binoculars, observed the port propeller to go into full feather and stop. The port wing dipped momentarily. The aircraft then proceeded straight ahead, wings level, in a shallow glide and disappeared into the trees. Immediately thereafter a large ball of fire was observed.

The crash occurred at 1044 EST after two hours and nine minutes of flight at approximately two miles beyond the upwind end of runway 25. The estimated aircraft weight at this time was 64,746 pounds. The crash circuit at NAS GLYNCO was energized at 1044 EST by control tower personnel. A rescue helicopter arrived over the crash scene approximately ten minutes later. An MB-1, fire fighting truck, arrived about twenty minutes after the crash, having proceeded through a heavy growth of pine trees, brush, and palmeto, seemingly impenetrable by ground vehicle. At the time that rescue personnel and equipment arrived, the aircraft was engulfed in heavy flames, with no apparent indication of survivors. Rapidly spreading fire through the underbrush hampered attempted rescue operations; however, the MB-1 was able to discharge its full supply of foam over portions of the burning wreckage. The aircraft wreckage was positively identified as BUNO 131441 by the numbers on the vertical stabilizer.

PART VI DAMAGE TO AIRCRAFT

The aircraft received ALFA damage as it progressed through the trees and on impact. The ensuing fire consumed the majority of the airframe in the immediate vicinity of the final impact point. Various parts which were torn loose from the aircraft during its descent through the trees were not subjected to fire. Wreckage distribution is illustrated by enclosure 1. Damage encountered by sub-assemblies is as indicated below:

FUSELAGE

Everything was consumed by fire back to where the empennage was torn off (jagged between stations 735 and 764.4) with the exception of wiring, avionics gear, control cables and components constructed of steel. The appearance of the debris indicated that the fuselage remained generally intact as evidenced by the location of: nose gear assembly, cockpit upper pedestal control handles, fuel panel stems, flight deck avionics gear, radio compartment chair, UHF transceiver box, galley stove, oxygen bottles, retro launcher and parts of the sonobuoy chutes. The main body came to rest 45° relative to the flight path.

EMPENNAGE

The main body of the empennage remained intact and was not consumed by fire. The top seven feet (station 122.25) of the vertical stabilizer and rudder was sheared. The outer tip of the starboard horizontal stabilizer, varicam, and all of the elevator was sheared off by the trees, 360 feet short of the final impact point. All but approximately 3 feet of the port varicam, elevator, and horizontal stabilizer were located 294 feet short of final impact. The bottom portion of the tail section was ripped open, 3 feet wide, from an undetermined point forward of station 735 aft to station 794.

PORT WING

The outer 9½ feet (station 473) was sheared off 252 feet short of the final impact. The top skin was peeled upward. The remainder of the wing (station 0 to 473) was consumed by fire with the exception of flap drive screws, some gear boxes, fuel valves (except the engine selector valve), and various steel components. The debris indicated this part of the wing generally remained intact.

STARBOARD WING

The outer 9½ feet (station 473) was sheared off in exactly the same location and manner as the port, and was found 114 feet short of final impact. The remainder of the wing was damaged in the same manner as the port except all fuel valves were located.

JET ENGINES

The port jet engine was torn off short of the final impact and was located only 18 feet from the rear section of the fuselage. The engine was fairly well intact with doors missing, nose section bent, nacelle bent, turbine wheel broken, and the tail cone located 264 feet short of final impact.

The starboard jet was torn off 90 feet short of the final impact and experienced severe damage similar to the port jet. Neither engine experienced fire damage to any extent.

RECIPROCATING ENGINES

The left engine was pointed in the direction of flight, 12 feet from the cockpit area. The accessory section and nose section were consumed by fire except for gear trains and other steel parts. The power section was generally intact with the majority of the cylinder heads destroyed by fire. Valves for these cylinders were in the immediate vicinity of the engine.

The starboard engine was laying on its right side pointing 270° relative to the fuselage, and 8 feet from the cockpit area. This engine experienced damage similar to the port engine except that the cylinder heads were generally in better condition.

PROPELLERS

The port propeller was intact and located immediately in front of the port engine, laying dome down with the propeller shaft completely severed. All blades were bent and severely damaged. The propeller spinner was torn off and consumed by fire. The governor for this propeller was intact.

The starboard propeller was laying dome down to the left of the starboard engine, but immediately behind the engine relative to the flight path. One blade was torn loose from the hub. The remaining three blades and the spinner remained attached but were severly bent and damaged.

LANDING GEAR

The port main gear remained in the up position in the port nacelle with the tire consumed by fire.

The starboard gear assembly and its mounting structure were torn loose from the airframe with the gear apparently in the down position.

The nose gear assembly was not intact.

PART VII THE INVESTIGATION

Introduction

The investigation began shortly after the accident occurred. First investigators on the scene were LCDR (b) NAS Glynco Aviation Safety Officer and LCDR (b) (6) Fleet Air Wing ELEVEN Aviation Safety Officer, both of whom arrived in less than one hour. LT (b) (6) Patrol Squadron SIXTEEN Aviation Safety Officer and a member of the Aircraft Accident Board, arrived at the crash scene approximately one hour after the crash. Doctor (b) (6) LT, USN(MC), Fleet Air Wing ELEVEN flight surgeon, and a member of the Patrol Squadron SIXTEEN standing Aircraft Accident Board, arrived within one hour and thirty minutes after the crash.

The initial investigation of aircraft wreckage and surrounding environs was seriously hampered due to persisting fire. Doctor (b) (6) confirmed the fact that none of the six crewmembers had survived the crash and made an initial diagnosis of cause of death as injuries, multiple and extreme, in all cases. Although the remains of all crewmembers had been burned beyond recognition, positive dental identification later showed the crewmembers to be:

LT Philip R. McHUGH, USN
LT James A. BROUGHTON, USN
Ronald W. ANDERSON, ADR3
James V. CAWTHON, ATCA
Kenneth J. MOSELER, AE2
Harry C. WILLIS, ADR3

On the scene investigation during the remaining daylight hours of 23 July was limited to witness interrogation, general examination of wreckage, and determination of the positions of the remains of the individual crewmembers within the wreckage. When it was learned that the aircraft was on a practice GCA prior to the crash and that the GCA run had been recorded, LT (b) (6) proceeded to obtain and listen to the tape recording. The remaining members of the Aircraft Accident Board arrived at NAS Glynco at 2145 EST on 23 July. All members of the accident board remained at NAS Glynco from 23 July to 27 July, gathering evidence and supervising removal of the entire wreckage to a hangar area where it could be examined in detail. During this period technical assistance was rendered by Mr. (b) (6) Lockheed Technical representative, and a group of highly qualified squadron maintenance petty officers. Evidence discovered during the course of the investigation can be divided into the following catagories and will be discussed as such: The tape recording, a transcript of which is enclosure 2 (A magnetic tape copy of which is enclosure 3, forwarded under separate cover with the original of this report), witnesses statements (enclosure 5), examination of wreckage, training and background of the pilots and plane captain involved, and maintenance records of the aircraft.

THE TAPE

The tape recording that was made, as a matter of standard practice, by the controlling GCA unit, is a unique article of evidence in that an apparently stuck microphone button in the cockpit of the aircraft caused sounds in the cockpit to be transmitted over UHF and therefore recorded.

The GCA approach was the fourth for the aircraft and all aproaches seemed to be normal in all respects. The GCA unit used a student controller. The aircraft flight evolutions during the fourth approach were apparently smooth and well coordinated. Members of the Aircraft Accident Board identified the voice of the pilot acknowledging for GCA transmissions during the approach as that of LT McHUGH. "Spangle 12" (the tactical voice call of the aircraft) came down the glide path holding just slightly above the glide path two and one half miles from the GCA touchdown point which is loacted 500 feet from the end of the runway. By one mile "Spangle 12" was on the glide path and receiving small heading corrections utilizing no gyro approach procedures. At one quarter mile the GCA controller advised the pilot that he was on glide path at precision minimums and should take over visually. At this point the runway centerline was reported straight ahead. The aircraft was observed, on radar, to level off as it passed over the end of the runway. "Spangle 12" was advised to climb straight ahead to 500 feet upon completion of the low pass. Twenty four seconds after passing over GCA touchdown point the voice of LT BROUGHTON as identified by members of the board started to roger for the last transmission of the GCA Controller. From this point on the mike button remained depressed and cockpit sounds were transmitted. LT BROUGHTON'S transmission was interrupted. Four seconds later the sound of ANDERSON'S voice, remote from the transmitting microphone and identified by enlisted personnel familiar with his voice, shouted "Feather it! Feather it! Feather". Two seconds after the third "Feather" there was a noticeable decrease in the engine noise being transmitted. Six seconds later there was a sound similar to a muffled explosion transmitted, seven seconds later a crunching sound, one second later LT BROUGHTON'S voice transmitted "we're going in, this is Spangle 12", and 21 seconds later what appears to be the final impact sound, was transmitted from the aircraft.

WITNESS

Since the aircraft passed over the runway at NAS Glynco immediately prior to crashing and crashed in the proximity of the airfield, many experienced, competent, and qualified witnesses were available. The vantage points of these witnesses is illustrated in enclosure 4. Initial witness interrogation was made on 23 July by LCDR (b) (6) and LCDR (b) (6) NAS Glynco Operations Duty Officer. Further questioning of witnesses was done by members of the board on 24 and 25 July. All witnesses' statements are included as enclosure 5 in the order mentioned hereafter. Evidence obtained from witness observation is outlined below: STATEMENT OF (b) (6) SA, (WHEELS WATCH)

(b) (6) position on the airfield enabled him to observe and hear the aircraft as power was applied for level off approachingthe runway. His description is the first evidence that a compenent of the aircraft's power plant system was malfunctioning, and places the time of initial malfunctioning as "a few seconds" after the application of power to stop rate of descent. The malfunction is defined as a malfunction of the starboard reciprocating engine when Birgen says, "black smoke poured from the top of the engine and the right prop was cutting off and on".

(b) (6) is a creditable witness concerning his ability to observe and report, however, his ability to estimate distances and altitudes is limited due to a lack of experience.

STATEMENT OF (b) (6) AC1, (CONTROL TOWER)

(b) was interrogated by members of the board in the control tower at NAS Glynco on 24 July. He first observed the aircraft a little past midfield (about abeam the tower) and reports that " his starboard jet appeared to me to be smoking". Using binoculars, the witness observed the port reciprocating engine "being feathered and come to a complete stop" when the aircraft was "about over the numbers, west end of the runway, at about 200 feet of altitude". The most significant evidence obtainable from this witness' observations is the port propeller feathering. Members of the board using the same binoculars that he used, standing on the same spot he stood, observed multi engine aircraft flying over the approximate position that (b) reports the port engine of "Spangle 12" was feathered. The propellers from this vantage point were clearly visible. At the time (b) saw the aircraft fly abeam the tower he was not in a position to determine whether smoke was coming from the starboard reciprocating or starboard jet engine. (b) is a completely creditable witness.

STATEMENT OF (b) (6) ACC, (GCA)

Chief (b) was questioned at the GCA trailer on 24 July by members of the board. On the day of the accident he was located at the most favorable position to observe the starboard side of the aircraft. His statement establishes as fact the malfunction of the starboard reciprocating engine. When first questioned by members of the board on 24 July Chief (b) could not recall hearing the sound of jet engines, or the absence of jet noise, at the time "Spangle 12" passed over the GCA trailer. However, after listening to a P2V with jets operating pass overhead on 24 July the witness concluded that on 23 July as "Spangle 12" flew by the GCA trailer "jet engines were not running". Chief (b) (6) is a highly reliable and creditable witness.

WITNESS EVALUATION OF JET ENGINE OPERATION

A group of creditable witnesses located at the jet line observed the aircraft proceed down the runway. Statements from various people, all within close proximity, differ concerning jet engine operation from abeam the jet line until crashing. Up to this point we have the word of Chief (b) and (b) (6) AC1, at the GCA trailer, and (b) (6) AN, at the crash truck that the jet engines were not running. Further observations vary from no jet noise (statement of (b) (6) AEAN) to noise of jet or jets at idle RPM but no faster (statement of (b) (6) (b) (6) AMH3), to maximum RPM jet noise (statement of (b) (6) CAPT, USMC).

ADDITIONAL WITNESS OBSERVATIONS

According to witnesses at all of the above mentioned vantage points the landing gear was fully retracted as the aircraft proceeded across the airfield. Descriptions of the flight path and attitude of the aircraft indicate that except for loss of altitude, the aircraft was fully under the control of the pilot.

WRECKAGE

The investigation of wreckage for evidence leading to the cause of the accident was divided into three phases: On the scene examination, detailed examination in a hangar at NAS Glynco, and disassembly inspection of power plant components by overhaul and repair facilities.

Distribution of wreckage at the crash scene is illustrated in enclosure 1. The following observations were made at the crash scene by members of the board on 23 and 24 July:

1. Port propeller blades were apparently in the feathered position and bent so as to indicate no rotation at the time of impact (enclosure 6).

2. Starboard propeller blades were apparently in a flat blade angle position and bent so as to indicate low or no RPM at impact (enclosure 7).

3. All flap drive screw jacks except one were in such a position so as to indicate flaps up (or nearly so) at time of impact. The remaining screw jack was bent and set at a position other than full up.

4. The port landing gear was in the up position in the port engine nacelle.

5. The starboard landing gear assembly was in the down and locked position.

6. The throttle quadrant and upper pedestal although recoverable did not yield useable evidence because of the effect of high G forces along the longitudinal axis upon components confined to movement along that axis. However, some credence may be given to detent type handles such as mixture controls, which were both rich and jet throttles, which were forward of the standby detent.

7. Two jet gages found were determined to be at zero percent RPM and approximately 25 percent RPM readings. It was impossible to correlate each gage with a port or starboard engine at this time.

8. Cursory examination of the jet engines showed extremely limited bending of blades and damage to the turbine and compressor section.

On 24 and 25 July squadron maintenance personnel assisted by working parties from NAS Glynco and supervised by members of the board, transported all recoverable wreckage to a hangar at NAS Glynco. On 26 July highly qualified and experienced squadron senior maintenance petty officers were called upon to assist the board in making the following observations:

1. The fuel system components found were used to reconstruct the mode of operation of the fuel system at the time of crash as illustrated in enclosure 19. Positions of valves illustrated in enclosures 8 and 9, were determined from examination of the valves except in the case of the port side engine selector valve. In this case it was determine that the valve was shutting off the fuel to the port reciprocating engine from the position of the chain end relative to the gear on the fuel panel stem. Starboard oil and hydraulic firewall shut off valves were in the shut off position as illustrated by enclosure 10.

2. Port propeller dome setting was full feather (as illustrated by enclosure 11).

3. Starboard propeller dome setting was full low pitch (as illustrated by enclosure 12).

4. Both mixture plates were near cut off.

5. Varicam setting was apparently zero.

6. The starboard jet throttle actuator was set at 100 percent RPM (as illustrated by enclosure 13).

7. The port jet throttle actuator was set at 100 percent RPM (enclosure 14).

8. The starboard jet fuel valve was in the open position. (enclosure 15).

On 28 July the four engines were shipped to appropriate overhaul and repair facilities for disassembly and inspection. The preliminary DIR is enclosure 18.

MAINTENACE RECORDS OF AIRCRAFT

The Logs, Records, Discrepancy reports and work orders were reviewed by the board.

All aircraft services changes, other than armament and electronics which are not pertinent to this report, had been incorporated with the exception of:

851 - Wings; Replacement and/or repair of ribs in flaps for the outer wing panel.
859 - Furnishings - Installation of hood over galley stove.
861 - Power Plant - Installation of cockpit lights and associated wiring for chip detector plugs.
*874A - Propulsion System; Installation of engine manual spark advance and Rich/Auto lean carburetor provision.
872 - Furnishings - Flight Deck ditching station-Relocation of.
875 - Photographic - Installation of provisions for ASW Camera pod.
877 - Installation of dual 30KVA constant frequency power.
878 - Power Plant - Replacement of self-sealing fuel tanks, oil tanks, and hose assemblies with bladder type fuel and oil tanks and light weight hose assemblies.
880 - Flight Control; Friction Disc Control Stand Lever-Replacement of.
888 - Jet engine control circuit breakers guard.
894 - Taxi light- Installation of.
895 - Modification of fuel pump shaft seal drain line bulkhead fitting.

Engine bulletins for jet and reciprocating engines which had not been incorporated are included as enclosure16.

All discrepancies that were written on the aircraft during the past six months were reviewed. Two oil pressure discrepancies were written on the starboard reciprocating engine for low oil pressure (60-65psi) on 6th and 7th of June which were corrected with no further indication of malfunction. The aircraft flew with two outstanding electrical discrepancies listed below:

1. "Master lever will not run propellers to full increase RPM - Toggles OK". After reviewing this discrepancy it was revealed that the Master Lever would not close the circuit to the low pitch lights. However, the propellers were in full low pitch, evidenced by the fact that when the toggles switches were energized the lights immediately came on.

2. "50 RPM split with the propellers in SYNC".

This was considered as an instrument error and was not a safety of flight discrepancy. The Quality Control Officer discussed both of the above discrepancies with the pilot and plane captain prior to taxi. The pilot signed the form A of the yellow sheet with an entry that he had reviewed all discrepancies in the form B book, which included B sheets subsequent to 27 February 1962.

The last maintenance inspection was a major calendar inspection completed on 13 July 1962. A review of the inspection sheet indicates that required work was performed and properly supervised.

*Note: All of ASC 874 had been incorporated with the exception of Revision A.

20

The daily preflight sheet indicates that aircraft components, with the exception of electronics gear, were properly preflighted by the plane captain. The pilot noted on the preflight sheet that he accepted the aircraft without an electronic preflight but would check out this equipment in flight.

TRAINING AND BACKGROUND OF PERSONNEL INVOLVED

1. LT PHILIP R. McHUGH, (b) (6) /1310, (PILOT IN COMMAND)

This 29 year old LT entered the Navy on 9/23/55. He was designated a Naval Aviator on 7/30/57. He reported to Patrol Squadron SIXTEEN on 7 Nov 1959 from Fleet Airborne Electronics Training Unit, Atlantic, Detachment TWO, NAS, Jacksonville, Florida. He was designated PP3P on 3/29/60, PP2P on 8/1/60 and PPC on 6/13/61. LT McHUGH had a standard instrument rating which was due to expire on 7/29/62. He had completed his annual physical on 7/20/62. LT McHUGH previous flight experience included S2F (59.5 hours), SNB (198.6 hours) and TV (24.4 hours). A review of his training record and past perfomance indicated LT McHUGH was a highly qualified Patrol Plane Commander. He was a squadron designated test pilot and instructor pilot.

2. LT JAMES A. BROUGHTON, (b) (6) /1310, (PILOT UNDER TRAINING)

This 29 year old LT entered the Navy on 2/7/54. He was designated a Naval Aviator on 12 July 1955 and a received a helicopter designation on 16 April 1958. LT BROUGHTON reported to Patrl Squadron SIXTEEN on 12 December 1961 from Patrol Squadron THIRTY where he had received replacement pilot training in P2V-5F aircraft. His previous assignment had been with Helicopter Utility Squadron FOUR (HU-4). He was designated PP3P in P2V aircraft on 11 June 1962. He had a standard instrument rating which was due to expire on 11 December 1962. His last annual physical was completed on 21 Dec 1961. LT BROUGHTON's previous flight experience included 795 hours of helicopter time,including operations in Antartica. Due to the fact that LT BROUGHTON had been flying helicopters from February 1958 until he reported to Patrol Squadron THIRTY in September 1961 and his recent fixed wing experience extremely limited, his training was being conducted under the COMFAIRWINGSLANT first tour pilot syllabus. LT BROUGHTON had been progressing through the COMFAIRWINGSLANT P2V Pilot Flight Training Syllabus satisfactorily with no indication of difficulty transitioning to fixed wing aircraft.

3. ANDERSON, RONALD W., ADR3, (b) (6) (PLANE CAPTAIN)

This Aviation Machinist Mate Third Class would have been 21 years old on (b) (6) He entered the Navy on 25 February 1960 and reported to Patrol Squadron SIXTEEN on 11 January 1961. He was advanced to ADR3 on 16 November 1961. On 9 June 1961 he completed a NAMTD R3350 maintenace course given by the Naval Air Mobile Training Group, NAS Jacksonville, Florida. Anderson was qualified as a plane captain in P2V-5F aircraft on 7 May 1962 in accordance with COMNAVAIRLANT Instruction 1616.2A. He had not requalified in accordance with COMNAVAIRLANT Instruction 1616.2B of 27 March 1962. He had his last flight physical on 16 July 1962. Anderson commenced flying in Patrol Squadron SIXTEEN on 23 May 1961 and since that time accumulated 520.9 hours in P2V aircraft. His training record, as maintained by the power plants division, indicates that he satisfactorily demonstrated the capability to perform all inflight plane captain duties.

21

PART VIII - THE ANALYSIS

GENERAL

The aircraft was on an authorized flight with a qualified crew and was being conducted as scheduled. The aircraft had been properly preflighted. The pilot accepted the aircraft with known discrepancies which the board feels did not affect safety of flight. The weather as reported in enclosure 17, was not a contributing factor. When the aircraft taxied at NAS Jacksonville, LT McHUGH, the PPC, was observed by line personnel to be in the right seat. All factors having a bearing on the accident will be discussed under the headings of material, personnel and supervisory.

MATERIAL

The only unincorporated Aircraft Service Changes or Engine Bulletins which could have had any bearing on the accident were: (1) ASC 861, installation of Chip Detector warning lights in the cockpit, (2) ASC 877, installation of dual 30 KVA constant frequency power. The warning lights, if installed, possibly could have given the pilot some forewarning of engine malfunction. The dual 30 KVA electrical system would have resulted in a lighter electrical load on the main DC bus at the time of the emergency, thus providing the necessary power to crank start a jet engine without taking the time to reduce the electrical load by securing any of the inverters. The fact that the final UHF transmission of the aircraft was as strong as those received prior to the emergency precludes complete loss of electrical power to the main D.C. bus being a contributing factor.

The outstanding discrepancy concerning the propeller low pitch lights could not have been a contributing factor. The pilot was able to set both propellers at full low pitch. This is evidenced by the fact that the port prop governor was found set at full increase RPM and that the starboard propeller dome was mechanically set at the low pitch stops.

The reciprocating engines and limited accessories which were sent to O&R for disassembly and inspection were in such poor condition that the report can be accepted as completely valid only with regards to the remaining components of the power section of the engines.

The preliminary DIR reveals no evidence of malfunction of the starboard reciprocating engine. However, reliable witnesses, being in position to observe the starboard engine, produced strong evidence of a malfunction associated with a rough running engine, smoke and fire. This evidence is not inconsistent with the preliminary DIR in that the difficulty, if confined to the ignition or induction systems, would not have been revealed in the disassembly and inspection.

Based upon witnesses' observations and the preliminary DIR indicating no significant discrepancies, it is concluded that the port engine was capable of being operated normally prior to feathering. The burned valves from the port engine as reported in the preliminary DIR subsequently have been determined by laboratry analysis to have been burned by fire associated with the crash.

It is concluded from witnesses' statements and the path of the aircraft through the trees, which average a height of 80 feet, that the aircraft was under control of the pilot and that malfunction of control surfaces is not a contributing factor.

PERSONNEL

At a low altitude, the likelihood of recovering from a loss of power on one reciprocating engine, with the jet doors closed, would depend primarily on the single engine capability of the aircraft. The aircraft weight at the time of the crash, as estimated by members of the board, was 64,746 pounds. At this weight, using military rated power on the good reciprocating engine, the aircraft had single engine operating capability. At normal airspeeds for the low pass phase of the approach and at an altitude of approximately 250 feet, a successful recovery from the loss of power of one of the reciprocating engines would have been possible. The NATOPS Manual recommends maintaining at least 141 knots CAS at 65,000 pounds for single engine climb. It is probable that the aircraft was at or very near this airspeed at the time of the emergency. Although the aircraft had the capability of single engine flight, rapid analysis and positive action would be required on the part of the pilot.

All available evidence positively establishes the fact that the port propeller was feathered. In order to determine where the propeller was feathered, an attempt was made to graphically relate sounds on the tape recording with witness observation and the aircraft's progress over the ground (enclosure 4). An average ground speed of 130 knots (217 feet per second) was assumed. This assumption is based on the fact that members of the board calculated, from the tape recording, an average ground speed of 127 knots on GCA final approach. This graphic analysis places the position of the aircraft at the time of port propeller feathering. This position precludes the likelihood of feathering the propeller in connection with normal ditching procedures.

With no evidence of port engine malfunction, the reason for feathering this engine is undetermined. The most probable reason is either incorrect analysis of the existing emergency or inadvertent pushing of the wrong feathering button. Either of these mistakes could be the result of haste on the part of the pilot in connection with the rapid action required in handling an engine emergency, involving fire, at a low altitude.

With the port engine feathered and some undetermined loss of power on the starboard engine, the pilot was in dire need of power from the jet engines. If he had been following Standard Operating Procedures the jet doors would have been closed. The emergency must have been recognized and jet doors opened shortly after passing over GCA touchdown point. The NATOPS Manual states that at 140 Kts IAS, 33 seconds would be required to windmill the jets to the necessary 8% to ignite. Approximately 15 additional seconds would be required for ignition and acceleration to 100%. Therefore, immediate action upon first indication of engine malfunction would have permitted 100% power on both jets shortly after the port engine was feathered. However, the witnesses' observations, particularly that of Captain Perkins, places the position of the aircraft at the time of obtaining jet power well beyond the point of feathering. With the aircraft losing airspeed and altitude at this point very little time was available for the jets to develop 100% power. If the aircraft was on the backside of the power curve at this point, recovery at such a low altitude would have been improbable even though the jets were approaching 100%.

The port fuel tank selector valve was found in the closed position, thus denying a source of fuel for the port jet. In order for the port

jet to be operating at a speed somewhere between idle and normal at impact, as indicated by the DIR, this valve must have been closed immediately prior to impact or as a result of impact. The same conclusion is made for the oil and hydraulic firewall shut off valve to the starboard reciprocating engine (enclosure 10) since the preliminary DIR reveals no evidence of oil starvation in this engine and it was in fact developing some power on impact. The unusual fuel system mode of operation found after the crash has therefore been determined to have been a result of either a last minute preparation for the crash or a result of impact. There are no indications of fuel panel mismanagement.

Another possible personnel contributing factor is the use of flaps. Standard Operation Procedure call for 20 degrees of flaps on GCA final, and for low passes that flaps be raised only upon reaching an altitude of 300 feet. Time distances checks of the controller's transmissions reveal an average ground speed of 127 knots on final approach leg. This speed is consistent with a 20 degree flap setting. The flap drive screw jacks established the fact that flaps were up at the time of impact. When the flaps were raised is undetermined. Although witnesses did not observe any changes of attitude associated with raising the flaps, it is possible that flaps were raised in small increments as the aircraft proceeded down the runway. Another possibility is that flaps were raised after the feathering of the port propeller in a desperate attempt to gain airspeed by reducing drag. Such action could have resulted in a sink rate sufficient, at this low altitude, to cause collision with the trees.

SUPERVISORY

Past Standard Operating Procedures and the NATOPS Manual do not require the use of jets other than on approaches where the weather is below 500 feet ceiling and 1 mile visibility. If the use of jets in either the idle or standby position for practice GCA low passes had been a standard operating procedure, it is quite obvious that less pressure for hasty action would have been exerted upon the pilot in this particular emergency.

PART IX - COMMENTS

The primary cause of the accident was personnel error in that the wrong propeller was feathered. This action could have been physically accomplished by either of the pilots or the plane captain.

In addition to the above, the following contributing factors were present in the accident.

(1) There was an undetermined malfunction of the starboard reciprocating engine which was accompanied by fire. This is significant in that it occurred at a low altitude whereby rapid action was required on the part of the pilot. Partial loss of power on this engine, in itself, was not significantally critical.

(2) The Standard Operating Procedures do not require the use of jet engines in standby or idle while making practice GCA approaches to low passes. Having jets readily available would have required less action on the part of the pilot during the emergency thereby reducing the pressure for hasty action.

(3) The possible untimely raising of flaps just prior to collision with the trees could have been critical in itself, due to a resulting loss of altitude.

PART X - RECOMMENDATION

It is recommended that Standard Operating Procedures be revised to require jets being placed in standby or idle when practicing instrument low approaches which do not involve a landing.

[illegible] 24 1962

STATEMENT OF (b) (6) SA, (b) (6)

I have been in the Navy for about five months.

On 23 July 1962, I stood about my tenth four hour wheels watch at NAS Glynco, Georgia. I was on wheels watch when the plane was making overpasses. On the third overpass that I saw the plane looked like it was landing. On the pass the plane was lower than the other passes. When it was approximately 50 feet from the runway, the engines on the plane started running faster as to make another overpass. A few seconds after the engines were run faster, the engine on the right side, or the engine on the side nearest the wheel watch, made a sound like a backfire and black smoke came streaming out. No parts fell from the plane. Black smoke poured from the top of the engine and the right prop was cutting off and on. He tried to climb but never did until he was clear of the runway. It kept an approximate 20 feet until the end of the runway. The engines were still running wide open but poured more smoke. The plane was off the approach end of runway 7 when it picked up altitude for about 10 seconds, then it went down. As soon as the plane dropped a flame hundreds of feet high went up.

(b) (6)

ENCLOSURE (5) 77

U. S. NAVAL AIR STATION
JACKSONVILLE 12, FLORIDA

IN REPLY REFER TO:
Code 834

9 AUG 1962

From: Commanding Officer, NAS, Jacksonville 12, Florida

To: Commanding Officer
Patrol Squadron 16
Naval Air Station
Jacksonville 12, Florida

Subj: Request for oil analysis for metal contamination; report on

Ref: (a) VP-16 Work Request no. 121-62 of 2 Aug 1962 with COMFAIRJAX 1st end. of 2 Aug 1962

1. Reference (a) requested an analysis of the oil remaining in 2 fire damaged oil coolers to determine the presence of metal contamination. The 2 oil coolers were received on 2 August 1962.

2. The fire damage to one of the oil coolers was so extensive that no analysis could be performed. An X-ray of this oil cooler was not effective in locating any metal particles. Further work was discontinued.

3. An X-ray of the 2nd oil cooler, possessing negligible fire damage, revealed an unusually clean oil cooler practically devoid of metal particles. The condition of this oil cooler was such that the few small metal particles could not have interfered with the performance of the oil cooler. Following the flushing of this oil cooler and collection of the material removed, several charred particles of rubber possessing thread marks were present. These had been removed from the valve portion of the cooler. Analysis of the minute metal particles was considered unnecessary since they were so small in size.

4. The rubber particles were believed to have originated from a charred portion of a hose connected to the oil cooler since the threads of the rubber corresponded to the threads of the tubing to which a hose had been fastened. Analysis failed to reveal any contributing factor toward engine malfunction.

(b) (6) [redacted]

By direction

Copy to:
COMFAIRJAX

ENCLOSURE (18)

CWO #38 (1'N)

DSH022
SEK017
RR RUCKSH
DE RUCKEK 16
ZNR
R 082102Z
FM CG MCAS CHERPT
TO BUWEPSFLTREADREPLANT
PWTRON ONE SIX
INFO NAS NORFOLK
CNO
CINCLANTFLT
COMNAVAIRLANT
BUWEPS
COMFAIRWINGSLANT
COMFAIRWING ELEVEN
COMFAIRJAX/COMNABS SIX
NAVAVSAFETYCEN
NAS GLYNCO
BT

8 1962 AUG 9 AM 4 52

ACT: VP-16

ATTN: 3Ø/STD

UNCLAS
PRI INVESTIGATION, J34-WE-34 ENGS BUNO 200655 AND 201614
PRELIMINARY REPORT.
A. BUWEPSFLTREADREPLANT 261524Z JUL
B. PATRON ONE SIX 251800Z JUL
1. DISASSEMBLY AND INSPECTION OF J34-WE-34 ENGS BUNOS 200655 AND 201614 FROM CRASHED P2V-5FS BUNO 131441 CONDUCTED AS REQUESTED IN REF A AND B
2. NO DISCERPANCIES NOTED IN EITHER ENG OR ACCESSORIES RECEIVED TO INDICATE MALFUNCTION WHICH MIGHT BE CONTRIBUTING FACTOR TO ACCIDENT.
3. FUEL CONTROL SER SECO 52 REPORTEDLY FROM PORT ENG BUNO 200655 FOUND

REF 261524Z; PATRON 16 REQ SHIP R3350-36WA ENGS AND PR PS,,,ETC,,,
251800Z; RELIABLE WITNESSES REPORT STBD ENGINE FIRE,,,ETC,,,

PAGE TWO RUCKEK 16
TO BE IN APPROX 40 DEGREE THROTTLE ANGLE (68 PERCENT RPM) POSITION. FUEL CONTROL SER 5996A REPORTEDLY FROM STBD ENG BUNO 201614 FOUND TO BE IN APPROX 20 DEGREE THROTTLE ANGLE (40 PERCENT RPM). THESE THROTTLE ANGLES NOT NECESSARILY ANGLES PRIOR TO CRASH IMPACT SINCE BOTH CONTROLS SUSTAINED IMPACT DAMAGE.
4. AS EVIDENCED BY LARGE QUANTITY OF FINE LIMBS, TWIGS, LEAVES, ETC. INGESTED, PULVERIZED AND COMPACTED INTO COMPRESSOR OUTLET SCREENS ENGS APPARENTLY OPERATING NORMALLY AT AN UNDETERMINED SPEED SOMEWHERE BETWEEN IDLE AND NORMAL AT TIME OF CONTACT WITH TREES.
5. NO FURTHER REPORT TO BE SUBMITTED UNLESS REQUESTED.
BT
08/2102Z

ENCLOSURE (8-1)

U. S. NAVAL AVIATION SAFETY CENTER
U. S. NAVAL AIR STATION
NORFOLK 11, VIRGINIA

NASC/60/ed
Ser: 1878
20 August 1962

From: Commander, U. S. Naval Aviation Safety Center
To: Chief of Naval Operations

Subj: NASC Investigation 35-62 concerning the accident of P2V-5FS BUNO 131441 occurring on 23 July 1962 near NAS Glynco, Georgia

1. The subject aircraft with LT P. R. McHUGH as PPC, occupying the right seat, and LT J. A. BROUGHTON a qualified PP3P, occupying the left seat, crashed one mile off the up wind end of Runway 25 following a practice GCA Low Approach. The aircraft was a strike. The crew of six received fatal injuries.

2. The investigation revealed the following:

a. The aircraft and crew were attached to VP-16 stationed at NAS Jacksonville.

b. The purpose of the flight was local training and 2.1 hours had elapsed of a scheduled 6.0 hour flight. Four practice GCA approaches to a low pass were made at NAS Glynco.

c. On the fourth GCA approach an airspeed of 125-130 kts was maintained on final. Upon completion of the approach power was applied to execute a low pass. As the power was applied the starboard engine was observed to "cut-out" and emit black smoke. The starboard engine continued to cut-out with fire and smoke emitting from the top portion of the engine, at approximately ½ of a mile beyond the end of the runway the port engine propeller was observed to go to the feathered position. Jet engine noise was heard prior to the feathering of the port engine.

d. The investigation of the impact area and the wreckage revealed that:

(1) The initial impact was between the radome and the tops of 80-100' trees. A slight amount of altitude was gained followed by a 10°-15° angle of impact with trees in a nose high altitude. The aircraft continued to settle shearing trees and severing portions of the aircraft. Final impact was made with the ground in a nose down, right wing down attitude followed by severe fire.

(2) The starboard propeller was in the full low pitch position.

(3) The port propeller was in the full feathered position.

(4) The port recip engine selector was in the off position.

(5) The starboard recip engine selector was in the on position.

"SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAV INSTRUCTION 3750.6D"

(6) The port recip main fuel tank selector was in the off position.

(7) The starboard recip main fuel tank selector was in the open position.

(8) The port Hydraulic/Oil valve was not recovered.

(9) The starboard hydraulic/oil valve was in the closed position.

(10) The port jet actuator was in the 100% position.

(11) The starboard jet actuator was in 100% position.

(12) The gross weight at the time of the accident was approximately 65,000 lbs.

e. The DIR's of the jet and reciprocating engines indicated that:

(1) The jet engines were operating at an indeterminate RPM upon impact with the trees.

(2) The salvagable portions of the reciprocating engines indicated no discrepancy concerning the port engine, nor could the starboard engine malfunction be determined. The starboard engine was developing an indeterminate amount of intermittant power.

f. The PPC, LT McHUGH had a total of 1612 flight hours, 1053 of which were in P2V-5/5FS and 41 hours in P2V-3/4 types of aircraft. He had been a designated PPC since June 1961.

g. LT BROUGHTON had a total of 3058 flight hours, 344 P2V-5/5FS hours and 74 P2V-2/3 hours. He held a PP3P designation.

h. The plane captain, an ADR3, had been designated since May 1962 and had 520 hours in the P2V-5FS. He was located aft of the pilots upon impact.

i. The wheels and flaps were up at the time of impact. Where the flaps were raised could not be determined.

j. Two crash fire fighters, wearing aluminumized asbestos suits were detached from a rescue helicopter approximately ½ mile from the crash site. One of the men died of heat exhaustion prior to reaching the site. The other suffered heat exhaustion, became unconscious and did not reach the site until approximately two hours after the crash.

3. The cause of the accident was personnel error in that the port engine propeller was feathered when a malfunction existed in the starboard engine. The jets were lighted, however insufficient altitude existed to permit

acceleration to stop the rate of descent which had been initiated when the port engine was feathered. Whether altitude was being maintained on the port engine prior to its feathering is not known, however, the P2V-5F Flight Manual states that "a wave-off at any normal landing weight can be made with Military Power on the good reciprocating engine and 100% RPM on the jet engine. At high landing weights, both jets should be utilized." Also, "The possibility of a wave-off is present on any landing, but on a single engine landing a wave-off is more critical. The decision to take a wave-off should be made as early as possible on the final approach. Do not attempt to go around unless conditions are ideal (light airplane, day VFR conditions, level terrain and good engine operating normally)."

4. Recommendations:

a. In view of the above it is recommended that the Chief of Naval Operations add to the applicable P2V NATOPS manuals the following: Jet engines will be placed in "IDLE" on all landing approaches and, secured on touchdown. On approaches where a wave-off is anticipated, such as GCA practice, the jet engines will be at idle. It is recognized that this may increase foreign object damage but this is considered an acceptable risk when the safety of the entire aircraft is at stake.

b. That wide publicity from all sources be given to the possibility of heat exhaustion in the wearing of crash fire-fighting protective clothing for great lengths of time while very active physically, and while in high temperature/humidity areas.

c. Proper handling of emergencies with emphasis placed on feathering will continue to be stressed by the Naval Aviation Safety Center.

T. J. BALL
Acting

Copy to:
CNO (orig. & 5)
BUWEPS (5 copies)
COMNAVAIRLANT
COMNAVAIRPAC
CNATRA
CNAVARTRA
CNARESTRA
COMASWFORLANT
COMFAIRWINGSLANT
COMFAWWING 11
VP-16
NAS GLYNCO

"SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAV INSTRUCTION 3750.6D"

1. OVERHAUL ACTIVITY: O&R DEPT NAS NORVA
2. REPORT NO.: 98
3. DATE OF D/I: 8/6/62
4. ASSEMBLY NOMENCLATURE AND PART NO.: PROPELLER 24260-313-16
ENGINE
5. ASSEMBLY (Model): 24260
6. ASSEMBLY (Serial): N178592
7. ASSEMBLY MFR: 73030
8. DATE REMOVED: 7/23/62
9. REMOVED FROM (Eng Mod): R3350-36WA
10. REMOVED FROM (Eng Ser): 562840
11. TOTAL HRS SINCE NEW: 2313.8
12. HRS SINCE LAST O/H:
13. DATE LAST O/H:
14. LAST OVERHAUL ACTIVITY: NAS ALAMEDA
15. NO. PREV O/H'S:
16. AIRCRAFT (Model): P2V-5FS
17. AIRCRAFT (BUNO): 131441
18. OPERATING ACTIVITY: VP-16
19. FUR-EFR-AAR-1/FH/GA: 788
20. REASON FOR REMOVAL AND CODE: AIRCRAFT CRASH 3W

21. FINDINGS

O	NO DISCREPANCY
B	BASIC (MFG/DESIGN) DISCREPANCY
N	NON-BASIC (MAINT/OPER) DISCREPANCY
F X	FOREIGN OBJECT DAMAGE

22. PRIMARY PART FAILURE (Part No.) | COND | ZONE

26. DESCRIPTION OF FINDINGS (Include name and part no. of primary part failure)

REFER TO ATTACHED SHEET.

23. DISCREPANT PARTS (Part No.) | COND.

24. PERTINENT BULLETINS, CHANGES, ETC. INCORPORATED

NUMBER	YES	NO

27. CONCLUSIONS

28. RECOMMENDATIONS

PRIORITY

29. PRIORITY DIR — REQUESTED BY: [redacted]

(b) (6) [redacted]

REFERENCE: MSG 261524Z JULY 1962

25. GREB 114 — APPLICABLE / INCORPORATED

31. TITLE: AERONAUTICAL ENGINEERING SUPT.

32. DATE: 8-13-62

DISASSEMBLY AND INSPECTION REPORT NAVWEPS FORM 4730/2 (11-61)

REPORT SYMBOL BUWEPS 4730-2

26. DESCRIPTION OF FINDINGS:

A. EXAMINATION PRIOR TO DISASSEMBLY REVEALED THAT THE NO. 3 BLADE HAD TORN FROM THE HUB SOCKET AS SHOWN BY ENCLOSURE (1).

B. THE NO. 1 BLADE HAD BROKEN APPROXIMATELY TWO FEET OUTBOARD OF THE CUFF.

C. THE NO. 2 BLADE HAD BROKEN AT THE SAME LOCATION AND BENT AFT JUST OUTBOARD OF THE CUFF AS SHOWN.

D. THE NO. 4 BLADE HAD BROKEN AT THE 66 INCH STATION.

E. THE TEETH WERE SHEARED FROM THE ROTATING CAM GEAR AT FOUR LOCATIONS AS SHOWN.

F. THE ROTATING CAM GEAR UPON REMOVAL OF THE DOME, WAS FOUND TO BE IN THE LOW PITCH POSITION.

G. NO OTHER DISCREPANCIES WERE FOUND.

27. CONCLUSIONS:

IT IS CONCLUDED THAT THE PROPELLER WAS ROTATING UNDER POWER IN LOW PITCH AT TIME OF IMPACT.

28. RECOMMENDATIONS:

NONE.

ENCL: (1)NAS NORVA PHOTO

PRIORITY DIR № 98

Encl (1)

1. OVERHAUL ACTIVITY: O&R DEPT NAS NORVA
2. REPORT NO.: 97
3. DATE OF D/I: 8/1/62
4. ASSEMBLY NOMENCLATURE AND PART NO.: GOVERNOR PROPELLER 5U18-47P1
ENGINE:
5. ASSEMBLY (Model): 5U18
6. ASSEMBLY (Serial): WH83941
7. ASSEMBLY MFR:
8. DATE REMOVED: 7/23/62
9. REMOVED FROM (Eng Mod): R3350-36WA
10. REMOVED FROM (Eng Ser): 563482
11. TOTAL HRS SINCE NEW: UNKNOWN
12. HRS SINCE LAST O/H:
13. DATE LAST O/H:
14. LAST OVERHAUL ACTIVITY:
15. NO. PREV O/H'S:
16. AIRCRAFT (Model): P2V-5FS
17. AIRCRAFT (BUNO): 131441
18. OPERATING ACTIVITY: VP-16
19. TUR-EFR-AIR-I/FH/GA:
20. REASON FOR REMOVAL AND CODE: AIRCRAFT CRASH 3W
21. FINDINGS
[0] [X] NO DISCREPANCY
[B] [ ] BASIC (MFG/DESIGN) DISCREPANCY
[N] [ ] NON-BASIC (MAINT/OPER) DISCREPANCY
[F] [ ] FOREIGN OBJECT DAMAGE
22. PRIMARY PART FAILURE (Part No.): COND: ZONE:
23. DISCREPANT PARTS (Part No.): COND.
26. DESCRIPTION OF FINDINGS (Include name and part no. of primary part failure)

THE GOVERNOR WAS DAMAGED TO SUCH AN EXTENT THAT IT COULD NOT BE TESTED.

REMOVAL OF THE ELECTRIC HEAD DISCLOSED THAT THE SPEEDER SPRING RACK WAS IN THE TAKE-OFF RPM POSITION.

NO DISCREPANCIES WERE FOUND.

24. PERTINENT BULLETINS, CHANGES, ETC., INCORPORATED

NUMBER	YES	NO

27. CONCLUSIONS: IT IS CONCLUDED THAT THE GOVERNOR WAS CAPABLE OF OPERATING AT TIME OF IMPACT.

28. RECOMMENDATIONS

NONE.

PRIORITY

29. [X] PRIORITY DIR — REQUESTED BY: BUWEPS FLTREADREPLANT — REFERENCE: MSG 261524Z JULY 1962
25. SPEC 114: APPLICABLE / INCORPORATED
30. SIGNATURE: (b) (6) [redacted]
31. TITLE: AERONAUTICAL ENGINEERING SUPT.
32. DATE: 8-13-62

DISASSEMBLY AND INSPECTION REPORT NAVWEPS FORM 4730/2 (11-61)

REPORT SYMBOL BUWEPS 4730-2

1. OVERHAUL ACTIVITY	2. REPORT NO.	3. DATE OF D/I	4. ASSEMBLY NOMENCLATURE AND PART NO.	ENGINE
O&R DEPT NAS NORVA	99	8-6-62	PROPELLER 24260-313-16	

5. ASSEMBLY (Model)	6. ASSEMBLY (Serial)	7. ASSEMBLY MFR	8. DATE REMOVED	9. REMOVED FROM (Eng Mod)	10. REMOVED FROM (Eng Ser.)
24260	N183032	73030	7/23/62	R3350-36WA	563482

11. TOTAL HRS SINCE NEW	12. HRS SINCE LAST O/H	13. DATE LAST O/H	14. LAST OVERHAUL ACTIVITY	15. NO. PREV O/H'S	16. AIRCRAFT (Model)	17. AIRCRAFT (BUNO)
	287.1		NAS ALAMEDA		P2V-5FS	131441

18. OPERATING ACTIVITY	19. FUR-EFR-AAR-I/FH/GA	20. REASON FOR REMOVAL AND CODE
VP-16	787	AIRCRAFT CRASH 3W

21. FINDINGS

[ ] O NO DISCREPANCY
[ ] B BASIC (MFG/DESIGN) DISCREPANCY
[ ] N NON-BASIC (MAINT/OPER) DISCREPANCY
[X] F FOREIGN OBJECT DAMAGE

22. PRIMARY PART FAILURE (Part No.) | COND | ZONE

26. DESCRIPTION OF FINDINGS (Include name and part no. of primary part failure)

REFER TO ATTACHED SHEET.

23. DISCREPANT PARTS (Part No.) | COND.

24. PERTINENT BULLETINS, CHANGES, ETC., INCORPORATED

NUMBER	YES	NO

PRIORITY

27. CONCLUSIONS

28. RECOMMENDATIONS

29.	REQUESTED BY	REFERENCE	25. GREB IT4	
[X] PRIORITY DIR	BUWEPSFLTREADREPLANT	MSG 261524Z JULY 1962		APPLICABLE / INCORPORATED

(b) (6) [redacted]

31. TITLE	32. DATE
AERONAUTICAL ENGINEERING SUPT.	8-13-62

DISASSEMBLY AND INSPECTION REPORT NAVWEPS FORM 4730/2 (11-61)

REPORT SYMBOL BUWEPS 4730-2

26. DESCRIPTION OF FINDINGS:

A. EXAMINATION PRIOR TO DISASSEMBLY DISCLOSED THAT ALL FOUR BLADES HAD BENT AT APPROXIMATELY THE 66 INCH STATION AS SHOWN BY ENCLOSURE (1).

B. BLADE DAMAGE OTHER THAN BENDING WAS CONFINED TO THE LEADING EDGE.

C. REMOVAL OF THE DOME ASSEMBLY AND EXAMINATION OF THE ROTATING CAM GEAR DAMAGE INDICATED THE PROPELLER WAS IN FULL FEATHER AT IMPACT, AS SHOWN BY ENCLOSURE (2).

D. EXAMINATION OF THE BLADES DISCLOSED THAT BLADES 3 AND 4 SHEARED THE TEETH FROM THE ROTATING CAM GEAR AND WENT TOWARD LOW PITCH PRIOR TO BENDING AFT, AS SHOWN.

E. THE NO. 1 AND 2 BLADE HAD TWISTED BEYOND THE FEATHER POSITION AND BENT AFT.

F. NO OTHER DISCREPANCIES WERE FOUND.

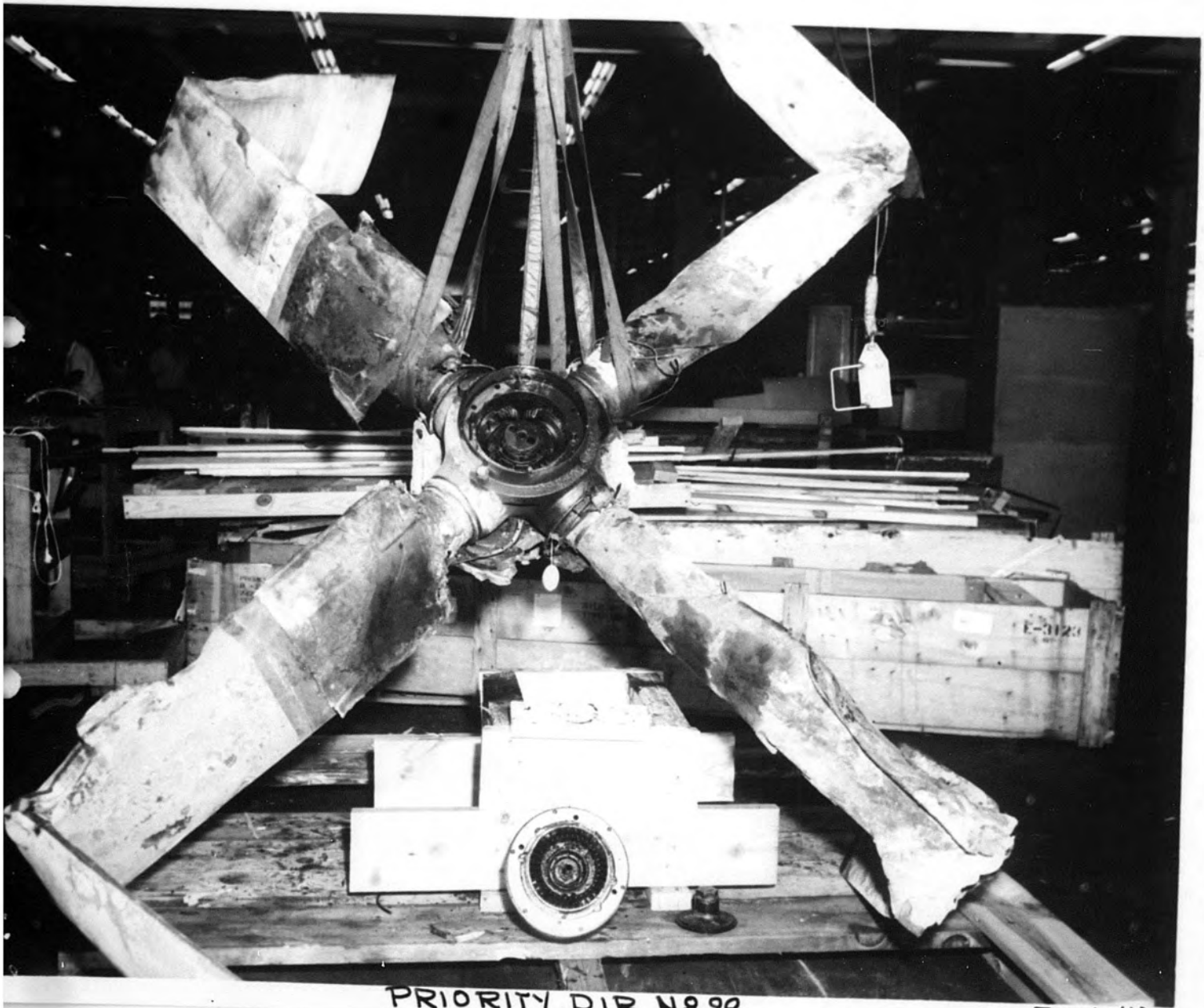
27. CONCLUSIONS:

IT IS CONCLUDED THAT THE PROPELLER WAS FULLY FEATHERED AT IMPACT AND DUE TO THE BENDING FOUND ON ALL FOUR BLADES WAS APPARENTLY ROTATING SLIGHTLY.

28. RECOMMENDATIONS:

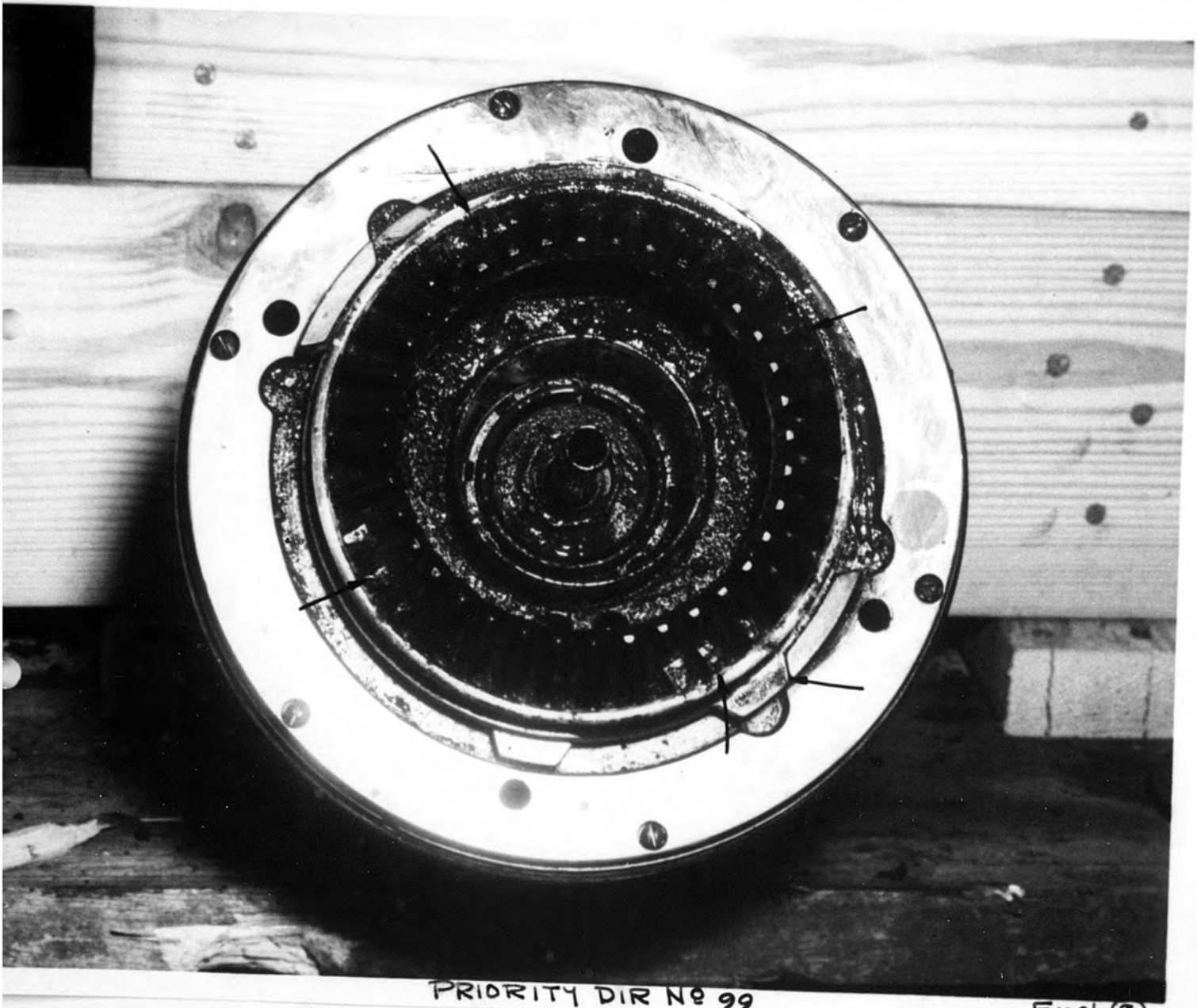
NONE.

ENCL: (1) NAS NORVA PHOTO
(2) NAS NORVA PHOTO



PRIORITY DIR No 99

Encl (1)



PRIORITY DIR Nº 99

Encl(2)

1. OVERHAUL ACTIVITY	2. REPORT NO.	3. DATE OF D/I	4. ASSEMBLY NOMENCLATURE AND PART NO.
O&R DEPT NAS NOR	96	8-7-62	

5. ASSEMBLY (Model)	6. ASSEMBLY (Serial)	7. ASSEMBLY MFR	8. DATE REMOVED	9. REMOVED FROM (Eng Mod)	10. REMOVED FROM (Eng
R3350-36WA	563482	66640	7-23-62		

11. TOTAL HRS SINCE NEW	12. HRS SINCE LAST O/H	13. DATE LAST O/H	14. LAST OVERHAUL ACTIVITY	15. NO. PREV O/H'S	16. AIRCRAFT (Model)	17. AIRCRAFT (BUNO)
UNKNOWN	493.0	UNKNOWN	NORFOLK	UNKNOWN	P2V-5FS	131441

18. OPERATING ACTIVITY	19. TUR-EFR-AAR	20. REASON FOR REMOVAL AND CODE
VP-16	785	CRASH DAMAGE 4B

21. FINDINGS
O NO DISCREPANCY
B BASIC (MFG/DESIGN) DISCREPANCY
N X NON-BASIC (MAINT/OPER) DISCREPANCY
F FOREIGN OBJECT DAMAGE

22. PRIMARY PART FAILURE (Part No.) | COND. | ZONE

26. DESCRIPTION OF FINDINGS (Include name and part no. of primary part failure)

REFER TO ATTACHED SHEET.

AAR
231810Z JUL 62

23. DISCREPANT PARTS (Part No.) | COND.

ENGINE SCRAPPED

24. PERTINENT BULLETINS, CHANGES, ETC. INCORPORATED

NUMBER	YES	NO

27. CONCLUSIONS

28. RECOMMENDATIONS

PRIORITY

29.	REQUESTED BY	REFERENCE	25. GREB 114	
X PRIORITY DIR	BUWEPSFLTREADREPLANT	MSG 261524Z JULY 1962	APPLICABLE	X
			INCORPORATED	X

30. [redacted]

31. TITLE: AERONAUTICAL ENGINEERING SUPT.

32. DATE: 8-8-62

DISASSEMBLY AND INSPECTION REPORT NAVWEPS FORM 4730/2 (11-61)

REPORT SYMBOL BUWEPS 4730-

26. DESCRIPTION OF FINDINGS:

MOST ALL MAGNESIUM AND ALUMINUM COMPONENTS OF THE ENGINE WERE DESTROYED BY FIRE AFTER IMPACT, SUCH AS THE CRANKCASE FRONT SECTION, SUPERCHARGER FRONT HOUSING, SUPERCHARGER REAR HOUSING, FRONT OIL SUMP, REAR OIL SUMP, INTAKE PIPES, IGNITION HARNESS, CARBURETOR, MAGNETO, DISTRIBUTORS, PISTONS AND CYLINDER HEADS. TWENTY-FOUR VALVES WERE ACCOUNTED FOR AND THERE WERE NO INDICATIONS OF A VALVE FAILURE PRIOR TO IMPACT AMONG THESE VALVES. THE HEAD HAD BEEN BURNED OFF ONE EXHAUST VALVE AND THE STEM HAD BEEN BURNED OFF ANOTHER VALVE. THE STELLITE HAD BEEN BURNED OFF SEVERAL OF THE VALVE FACES. EXAMINATION OF THE PISTON RINGS LEFT FUSED TO THE CYLINDER WALLS INDICATED THERE HAD BEEN NO PISTON NOR PISTON RING FAILURE PRIOR TO THE CRASH. THE ACCESSORY DRIVE AND STARTER SHAFT WAS BURNED INTO APPROXIMATELY SIX INCHES FROM THE SPLINED END. INSPECTION OF THE IMPELLER DRIVE GEAR TRAIN DID NOT REVEAL ANY COMPONENT FAILURES. THERE WAS NO SCORING PRESENT ON ANY OF THE BEARINGS AND BUSHINGS THAT WERE RECOVERED, NOR WAS THERE ANY INDICATION OF A MASTER ROD BEARING FAILURE. NONE OF THE ARTICULATED RODS WERE BROKEN. THE PROPELLER SHAFT WAS SHEARED APPROXIMATELY TEN INCHES FROM THE FLANGED END DUE TO IMPACT. INSPECTION OF THE TWO POWER RECOVERY TURBINES RECEIVED DID NOT REVEAL ANY EVIDENCE OF A FAILURE NOR PASSAGE OF FOREIGN OBJECT OR OBJECTS.

27. CONCLUSIONS:

INVESTIGATION OF THE ENGINE WHICH WAS REMOVED FROM THE PORT POSITION OF THE AIRCRAFT DID NOT DISCLOSE ANY EVIDENCE OF OIL STARVATION, ENGINE MALFUNCTIONING AND/OR ENGINE COMPONENT FAILURE PRIOR TO THE CRASH. INVESTIGATION OF THE BURNED VALVES REVEALED THEY HAD BEEN BURNED DUE TO THE EXTENSIVE HEAT FROM THE MAGNESIUM FIRE AFTER IMPACT.

28. RECOMMENDATIONS:

NONE.

R&RG

1. OVERHAUL ACTIVITY O&R DEPT NAS NORVA	2. REPORT NO. 94	3. DATE OF D/I 8-3-62	4. ASSEMBLY NOMENCLATURE AND PART NO.	ENGINE X
5. ASSEMBLY (Model) R3350-36WA	6. ASSEMBLY (Serial) 562840	7. ASSEMBLY MFR 66640	8. DATE REMOVED 7-23-62	9. REMOVED FROM (Eng Mod) / 10. REMOVED FROM (Eng Ser)
11. TOTAL HRS UNKNOWN	12. HRS SINCE 876.7	13. DATE LAST UNKNOWN	14. LAST OVERHAUL ACTIVITY NORFOLK	15. NO. PREV O/H'S UNKNOWN / 16. AIRCRAFT (Model) P2V-5FS / 17. AIRCRAFT (BUNO) 131441
18. OPERATING ACTIVITY VP-16	19. FUR-EFR-AAR-I/FH/GA 786	20. REASON FOR REMOVAL AND CODE CRASH DAMAGE 4B		22. PRIMARY PART FAILURE (Part No.) / COND. / ZONE

21. FINDINGS
O NO DISCREPANCY — B BASIC (MFG/DESIGN) DISCREPANCY — N X NON-BASIC (MAINT/OPER) DISCREPANCY — F FOREIGN OBJECT DAMAGE

23. DISCREPANT PARTS (Part No.) — COND.
ENGINE SCRAPPED

26. DESCRIPTION OF FINDINGS (Include name and part no. of primary part failure)

REFER TO ATTACHED SHEET.

AAR 231810Z July 62
COLL GROUND UNDET
A/A
/ 133 '0
S' R&C'D

24. PERTINENT BULLETINS, CHANGES, ETC., INCORPORATED

NUMBER	YES	NO

27. CONCLUSIONS

28. RECOMMENDATIONS

PRIORITY

25. GREB 114 — APPLICABLE X — INCORPORATED X

X PRIORITY — REQUESTED BY BUWEPSFLTREADREPLANT — REFERENCE MSG 261524Z JULY 1962

30 [redacted] — 31. TITLE AERONAUTICAL ENGINEERING SUPT. — 32. DATE 8-6-62

REPORT SYMBOL BUWEPS 4730-2

DISASSEMBLY AND INSPECTION REPORT ... 4730/2 (11-61)

26. DESCRIPTION OF FINDINGS:

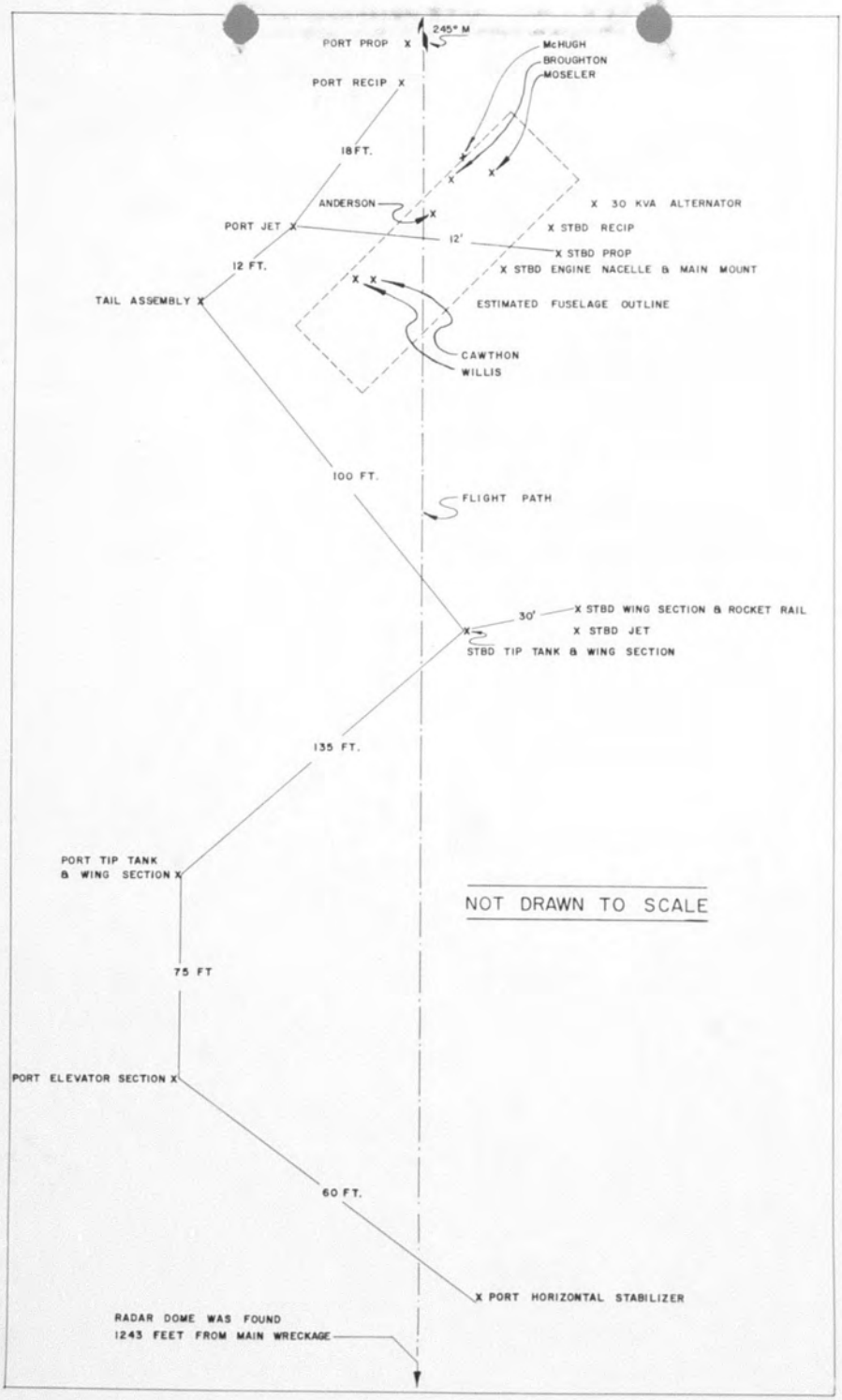
MOST ALL MAGNESIUM AND ALUMINUM COMPONENTS OF THE ENGINE WERE DESTROYED BY FIRE. ALL THE CYLINDER HEADS WERE DESTROYED BY FIRE EXCEPT FOR THE NUMBER 1, 15, 16, 17 AND 18 CYLINDER HEADS. ALL THE INTAKE AND EXHAUST VALVES WERE ACCOUNTED FOR AND WERE FOUND TO BE SATISFACTORY. EXAMINATION OF PISTONS AND PISTON RINGS NOT DESTROYED INDICATED THERE HAD NOT BEEN EITHER A PISTON OR PISTON RING FAILURE. THE MAJORITY OF THE PISTONS WERE DESTROYED BY FIRE LEAVING THEIR RESPECTIVE PISTON RINGS FUSED TO THE CYLINDER WALLS. THERE WAS NO SCORING PRESENT ON ANY OF THE BEARINGS AND BUSHINGS RECOVERED, NOR WAS THERE ANY INDICATIONS OF A MASTER ROD BEARING FAILURE. EXAMINATION OF THE ARTICULATED RODS REVEALED NONE TO BE BROKEN OR BENT. INSPECTION OF THE IMPELLER DRIVE GEAR TRAIN REVEALED NO EVIDENCE OF A FAILURE. THE PROPELLER SHAFT WAS SHEARED APPROXIMATELY 10 INCHES FROM THE FLANGED END DUE TO CRASH IMPACT. THE ENGINE ACCESSORIES WERE EITHER DESTROYED BY FIRE OR DUE TO EXTENSIVE FIRE DAMAGE NO CONCLUSIVE RESULTS COULD BE OBTAINED. HOWEVER THE MANUAL MIXTURE CONTROL ON THE REMAINING PORTION OF THE CARBURETOR WAS IN THE IDLE CUT-OFF POSITION. INSPECTION OF THE POWER RECOVERY TURBINES REVEALED NO EVIDENCE OF A FAILURE OR PASSAGE OF FOREIGN OBJECT OR OBJECTS.

27. CONCLUSIONS:

INVESTIGATION OF THE ABOVE ENGINE WHICH WAS REMOVED FROM THE STARBOARD POSITION OF THE AIRCRAFT DID NOT DISCLOSE ANY EVIDENCE OF OIL STARVATION, ENGINE MALFUNCTION AND/OR COMPONENT FAILURE. THE POSITION OF THE CARBURETOR MANUAL MIXTURE CONTROL IS NOT SIGNIFICANT AS IT COULD HAVE BEEN A RESULT OF CRASH IMPACT.

28. RECOMMENDATIONS:

NONE.


245° M
PORT PROP X
McHUGH
BROUGHTON
MOSELER
PORT RECIP X
18FT.
ANDERSON
X 30 KVA ALTERNATOR
PORT JET X
X STBD RECIP
12'
X STBD PROP
12 FT.
X STBD ENGINE NACELLE & MAIN MOUNT
TAIL ASSEMBLY X
ESTIMATED FUSELAGE OUTLINE
CAWTHON
WILLIS
100 FT.
FLIGHT PATH
30'
X STBD WING SECTION & ROCKET RAIL
X STBD JET
STBD TIP TANK & WING SECTION
135 FT.
PORT TIP TANK
& WING SECTION X
NOT DRAWN TO SCALE
75 FT
PORT ELEVATOR SECTION X
60 FT.
X PORT HORIZONTAL STABILIZER
RADAR DOME WAS FOUND
1243 FEET FROM MAIN WRECKAGE

ENCLOSURE

ENCL (2)

TRANSCRIPT OF GCA UNIT TAPE RECORDING OF LAST APPROACH OF SPANGLE 12 (BUNO 131441) ON 23 JULY 1962.

GCA: Spangle 12, Your Student Controller, if runway not in sight at minimums, climb to and maintain 1,500 immediately and stand by for further clearance. Acknowledge.

Spangle 12: Roger, 12.

GCA: Spangle 12, Maintain, correction, turn left, maintain 1,100, you're in left turn, your 10 second gear warning at this time, approaching glide path. Set up your normal rate of descent, stop your turn, below glide path coming up, slightly below glide path, very slightly below glide path, coming up and on glide path, four miles from touchdown, on glide path, on glide path. Outside observer holds you visual contact. You are going above glide path, slightly above glide path, slightly above and holding. Slightly above glide path, turn right, slightly above glide path in a right turn, coming down now, stop your right turn, check wheels down and locked. Acknowledge.

12: Gear down and locked.

GCA: Spangle 12, Roger, you are slightly above glide path. Three miles from touchdown, slightly above, slightly above glide path and holding, slightly above glide path, maintain your present heading, slightly above glide path and holding. Slightly above, 2½ miles from touchdown, the tower clears you for a low pass. Surface winds WSW 6. You are slightly above glide path coming down now, slightly above, very slightly above and holding, very slightly above and holding, two miles from touchdown, turn left. You are very slightly above glide path in a left turn, stop your turn, very slightly above glide path and holding. You are very slightly above glide path and holding, very slightly above and holding, very slightly above glide path and holding. Maintain your present heading 1½ miles from touchdown, you are very slightly above glide path and holding. Now turn right, in a right turn, stop your turn, very slightly above and holding, coming down now on glide path, one mile from touchdown, approaching minimums. Pop your hood, you are on glide path, on glide path, now turn right, on glide path, stop your turn, on glide path, on glide path, ½ mile from touchdown, on glide path, on glide path now; turn left, stop your turn, 1/4 mile at precision minimums. Take over visually centerline directly ahead, observe you leveling off as you pass over end of runway. On course over GCA touchdown. Upon completion of your low pass continue straight across the field, climb to 500 feet, GCA over.

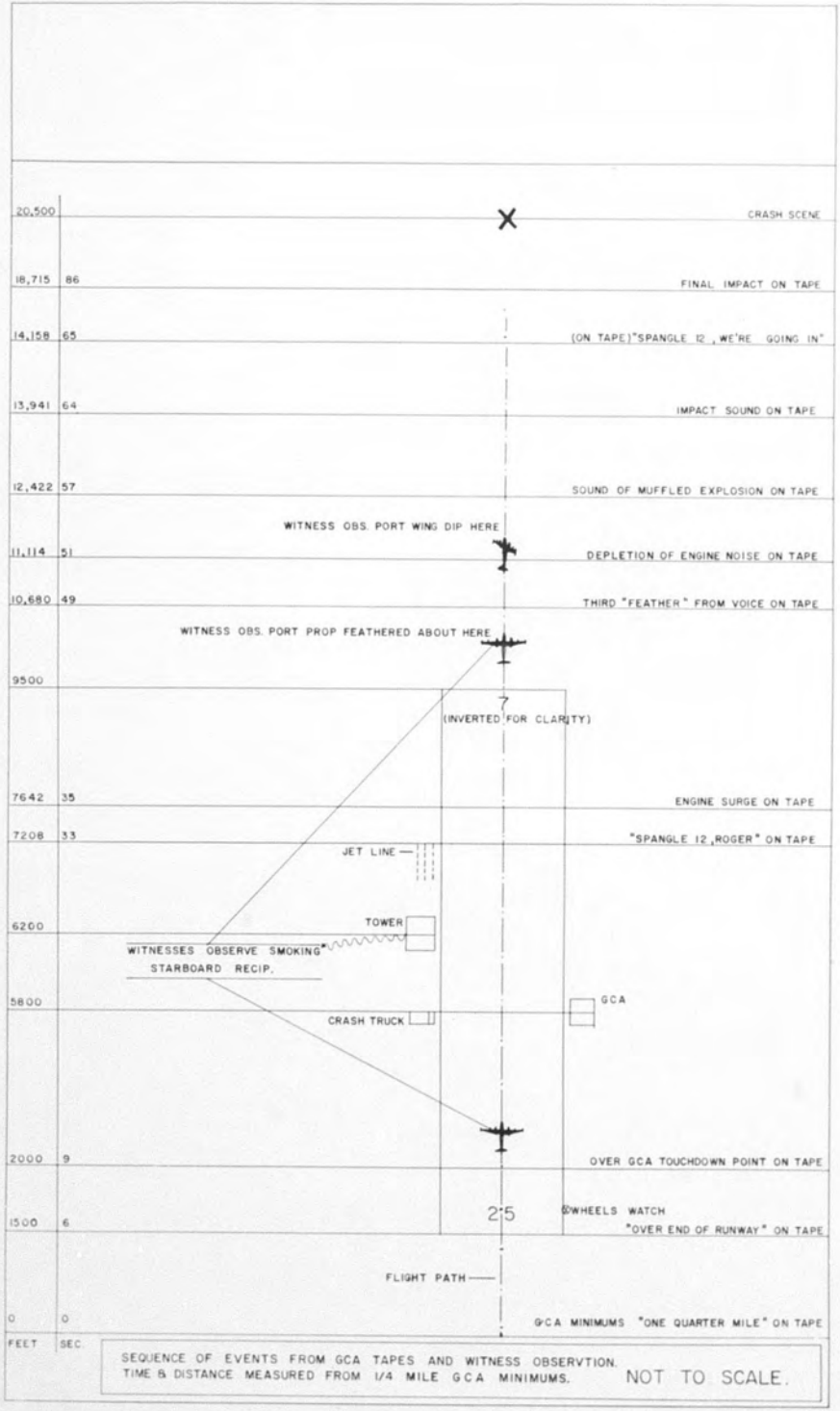
12: GCA this is Spangle 12....Feather it! Feather it! Feather .... We're going in, this is Spangle 12.

GCA: Go ahead, Spangle 12, Glynco GCA.

ENCLOSURE (12)


DATE OF ACCIDENT 23 JULY 1962
LOCAT GLYNCO, GEORGIA
TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 SQUADRON VP-16
AIR ACCIDENT REPORT NUMBER 1-62

ENCLOSURE ( )



SEQUENCE OF EVENTS FROM GCA TAPES AND WITNESS OBSERVTION.
TIME & DISTANCE MEASURED FROM 1/4 MILE GCA MINIMUMS. NOT TO SCALE.

ENCLOSURE (7)

JUL 24 1962

STATEMENT OF (b) (6) AC1, (b) (6)

I have worked in control towers for about two years. I have held a senior controllers certificate since November of 1961.

I was section leader in the tower at the time of the crash, supervising the approach control and local control positions. Spangle 12 was making a GCA low pass to runway 25. Approach control had two T2V's, one making a UHF ADF approach and one making a T-4 approach. I looked up from the approach control position and saw Spangle 12 a little past mid field; his starboard jet appeared to me to be smoking. Round spurts almost like smoke rings. I grabbed a pair of binoculars to check the aircraft. When Spangle 12 was about over the numbers, west end of the runway, at about 200 feet altitude, I observed #1 engine, port side, being feathered and come to a complete stop. I immediately set off the crash phone. The left wing dipped slightly. I turned toward the crash phone and when I looked back the P2V had disappeared. About 20 to 30 seconds later I observed a ball of fire that appeared to rise about 300 feet or more. The time I first observed this was 1043(R); I saw the fireball at 1045(R).

(b) (6)

[redacted]

ENCLOSURE 15 B

JUL 24 1962

STATEMENT OF (b) (6) ACC, (b) (6)

I am the leading chief of the GCA Unit 32 stationed at NAS Glynco, Georgia. I have worked with GCA units for about six years and as an Aviation Machinist Mate prior to that for about sixteen years. At about 1035(R) on 23 July 1962 I was in the GCA lounge trailer listening to the practice approaches of Spangle 12. I heard Spangle 12 passing over the trailer on GCA wave off with an apparent rough running reciprocating engine. The engine sounded like it was cutting in and out. On hearing the rough running engine, I jumped up and looked out the window facing west and saw that the starboard reciprocating engine was smoking badly (black smoke) with intermittent flames coming out from around the cowl flaps. From my vantage point I had a clear, unostructed view of the starboard side of Spangle 12. At this time the aircraft was about 3000 feet from the upwind end of runway 25 at about 200 to 250 feet of altitude. The landing gear was up at this time. Just as the aircraft approached the upwind end of runway 25 a big ball of flame came out of the top of the starboard reciprocating engine and the aircraft veered 10 degrees to the left in a very shallow bank. The aircraft then leveled its wings and descended in a shallow glide. When I saw the smoke coming from the engine I advised the tower to alert the crash crew. From the sound of the aircraft I believe Spangle 12's jet engines were not running as he passed over the GCA trailer.

(b) (6)

ENCLOSURE (5)

JUL 24 1962

STATEMENT OF (b) (6) AC1, (b) (6)

I am a final approach controller attached to GCA Unit #32, at NAS Glynco, Georgia. I've been working with GCA for about one year and as an air controller for approximately 14 years. At about 1030 local on 23 Jul 1962, I was outside observer at the GCA unit. I had observed all of Spangle 12's previous approaches. At this time, Spangle 12 was on his fourth approach to runway 25. I had visual contact with Spangle 12 from 6 miles on final throughout the approach and wave-off. I was looking out the windows on the east side of the lounge trailer and observed the P2V level off as he was notified he was over GCA touchdown and saw his wheels come up and go into the wheel wells. The wave off looked normal and he had made an excellent GCA approach. He was out of my sight for about five seconds as he passed over the trailer. Chief (b) (6) said his engine sounded rough and I opened the door on the west side of the trailer and stepped out onto the first step. I noticed a slight trail of dark blue or black smoke from the starboard engine which got heavier as he proceeded down the runway. I did not notice any fire until he was about over the upwind end of runway 25. I had a clear view of the starboard side of Spangle 12 after it passed the GCA shack untiliit went out of sight behind the trees. As Spangle 12 passed over upwind end of runway 25, I noticed a good sized burst of flame come out of the top side of the starboard engine. Just after this the plane made a slight turn to the left with no noticeable

ENCLOSURE (5)

bank. Soon after this I heard, "I'm going in, this is Spangle 12" over the radio. After Spangle 12 disappeared behind the trees, I saw a big mushroom of dark orange flames (a ball of flame) and black smoke. It went well above the trees. I observed the starboard prop turning very slowly before he went out of sight. The prop did not appear to be spinning at a constant speed but seemed to be intermittently slowing down and speeding up. After hearing another P2V making a waveoff from GCA with jets, I definitely feel that Spangle 12 was not using his jets as he passed over the GCA trailer on wave off.

(b) (6) [redacted]

ENCLOSURE 151

JUL 25 1962

STATEMENT OF [redacted] AN, [redacted]

I am assigned to the crash crew at NAS Glynco, Georgia. I have performed duty as a member of the crash crew for about a year.

On 23 July I was standing by in an MB-5 crash truck, parked adjacent to the runway, about halfway down the way. I first noticed this P2V about 2000 feet west of the landing end of the runway. I saw that the right engine (recip) was smoking and missing. As he flew by me he looked slower than other P2V passes I had seen. From the sound the aircraft made the jets were not running as he passed by me. I could see as he flew towards me that his jet doors were closed. After he flew past me the amount of smoke increased and came out in a steady stream. After he passed the runway he turned to the left slightly and started going down. Then he seemed to stop turning and kept going down. I saw him go into the trees and then saw a big ball of smoke and flame.

[redacted]

ENCLOSURE (5)

JUL 24 1962

STATEMENT OF (b) (6), AEAN, (b) (6)

On July 23, 1962, around 1030 I heard a noise that sounded like a recip motor missing. I was standing in back of an F3D on the back line at the time, approximately at the 2000 foot marker from the west end of the runway. When I looked up I saw a P2V come over the runway about 200 feet above the runway. The starboard engine was coughing black smoke. I did not see any fire in the engine. The P2V seemed to be holding the altitude that it was at until it started to turn into the port engine, west of the runway. At about the same time the starboard engine quit popping and belching smoke. After the P2V started to turn into the port engine it started to lose altitude. I kept waiting to hear the jet engines light off, but as far as I could tell they never did. As soon as the P2V started to lose altitude while in a left turn, the aircraft leveled out and then disappeared into the trees. I heard no explosion of any kind other than the noise that the motor was making going over the field.

I have been connected with naval aviation since March 26, 1962. I have been flying for nine years in private aircraft, but I am not a pilot.

(b) (6)

ENCLOSURE (5)

JUL 24 1962

STATEMENT OF (b) (6) AMH3, (b) (6)

I was located about 3/4 of the way down the jet line, toward the west end. I heard the P2V as it approached the east end of the runway. I looked up about the time an engine coughed twice. I estimate the aircraft altitude to be 150 - 200 feet high when it was approximately 1000 feet from the approach of runway 25. After coughing two times the engine seemed to smooth out and was running fine, still holding the same altitude. On neither cough did smoke emit from the engine. The aircraft was clean in configuration all the time it was possible for me to see clearly. I noticed no increase in power of either engine. As the aircraft neared the 2000-foot markers on the west end of the runway the starboard engine started coughing rapidly; following each cough a blackish-gray cloud of smoke would come off the engine. At this time I climbed upon the tail of an F3D aircraft for a better view (approximately 12 feet high). I remember hearing the jet engines or engine trying to light off. The engines or engine (jet) may have reached idle RPM but no faster. I don't believe the power on the port engine was ever increased; however, the aircraft was veering slightly to port, with port wing slightly down. About this time he started losing altitude rapidly. I don't recall hearing the starboard engine (recip) cough or seeing it smoke at this time. I couldn't say if it was feathered or secured as the aircraft was too far away to tell. It was still clean in configuration. As the aircraft went down below the trees I could hear it for a second or two then I saw this tremendous ball of flame about 100-150 feet high (est.), followed by smoke. I heard no noise, only flame and smoke. I forgot to mention that the smoke following each cough seemed to come from the top of the engine (starboard

ENCLOSURE (5)

recip), and when I saw the aircraft from the front the jet doors were closed.

I am a line trouble shooter. Have been in the Navy about two years and two months. I have been working around aircraft about 1½ years.

(b) (6) [redacted]

ENCLOSURE (5)

JUL 25 1962

STATEMENT OF (b) (6) CAPT, (b) (6) USMC

I am a naval aviator with about 2200 hours flight experience, assigned to NATTC at NAS Glynco.

At approximately 1040 hours on 23 July 1962 I was preflighting an F3D aircraft for a planned local flight out of NAS Glynco, Georgia. While under the wing of the aircraft I heard a reciprocal engine malfunctioning, missing rather than a complete power failure. The aircraft sounded like it was executing a low pass over the field. AEAN (b) (6), plane captain for my aircraft, called to me saying the aircraft was in trouble and was "going in". I ran to the rear of my aircraft to see the troubled aircraft. I saw a P2V aircraft at approximately 300 feet in level flight proceeding to the field boundaries on a heading of about 250° magnetic. The aircraft held altitude and level flight for several seconds and then began to settle. There were no signs of exterior trouble, that is smoke, flying parts, trailing landing gear, etc., from the first time I saw the P2V until the last time I saw it. The P2V continued to settle holding level flight. The attitude was good for ditching all the way until disappearing behind the line of trees to the west of the field. As the P2V settled out of sight, I heard the jet engines, sounded like F3D with both engines, turning up at maximum RPM. I do not recall hearing the jet engines operating on the P2V passed over the field. I did not hear the jet engines start up. I did not see either reciprocating engine in a feathered condition as the P2 V was too far away to notice the props. It did appear that both props were turning. The P2V settled out of sight and a few seconds later a large black cloud rose above the trees.

(b) (6)

[redacted]

OSURE [5]

JUL 24 1962

STATEMENT OF [redacted] ACC, [redacted]

I have been an air controller for twelve years. On the morning of 23 July 1962 I was working in the tower at NAS Glynco, Georgia.

At approximately 1043(R) Spangle 12 made a low pass on runway 25 on GCA frequency. His altitude appeared to be about 200 feet. About 6000 feet down the runway (25) I observed puffs of black smoke coming from the starboard side of the aircraft. The puffs continued at regular intervals and appeared from the jet on the starboard side. The aircraft appeared to climb to three or four hundred feet, turn slightly left, left wing down slightly and begin to settle. His glide was very shallow and looked as if he would recover. Crash circuit was opened and reported as a crash while the aircraft was approximately 100 feet above the tree line. He disappeared behind the tree line to the west edge of the field. A large ball of fire was observed, followed by a column of black smoke. All crash equipment was dispatched immediately.

[redacted]

ENCLOSURE (5)

AIRCRAFT FIRE/RESCUE REPORT
NAVWEPS FORM 11135/1 (8-60)

NO TRANSMITTAL LETTER REQUIRED

REPORT SYMBOL BUWEPS 11135-1

STATION AND LOCATION: U. S. Naval Air Station, Glynco, Georgia

DATE OF REPORT: 23 Jul 1962

AFRR NO.:

DATE AND TIME OF INCIDENT: 1044 (L) 23 Jul 1962

ON STATION:

OFF STATION: X

REPORTING CUSTODIAN: PATRON SIXTEEN

MODEL AIRCRAFT INVOLVED: P2V-5FS

BUREAU NO.: 131441

TO: Chief, Bureau of Naval Weapons (SEEQ)

VIA — MILITARY COMMAND: Chief, Naval Air Technical Training Command

SIGNATURE:

EXACT LOCATION OF INCIDENT: Bearing 253° true 4 miles from Glynco Tower

TYPE OF INCIDENT						FIRE INVOLVED		ESTIMATED CASE
TAKE-OFF		LINE OR LOADING		FUELING		YES	X	Lost power starboard engine
LANDING		PARKED		MAINTENANCE		NO		
TAXIING		DEFUELING		INFLIGHT	X	IMPACT IGNITION	X	
OTHER (Specify)						DELAYED IGNITION		

CONDITIONS AT TIME OF INCIDENT

GENERAL WEATHER PICTURE: .7 clouds at 2,000 Visibility 7 miles Air Temperature 88°

WIND DIRECTION	WSW
WIND VELOCITY (mph)	6 kts
TEMPERATURE (°F)	88°

NATURE OF TERRAIN AT AND IN APPROACH TO INCIDENT: Heavy growth of pine trees, brush and palmetto

LIQUID FUEL QUANTITY

ESTIMATED ON BOARD BEFORE INCIDENT (lbs)	15,400
ESTIMATED ON BOARD AFTER INCIDENT (lbs)	Unknown
ESTIMATED SPILL AREA (Size in feet)	100' Diameter

OTHER FUELS: None

PERSONNEL RESCUE

NO. PERSONNEL ON BOARD AIRCRAFT	6
NO. PERSONNEL SURVIVED	None
NO. PERSONNEL ESCAPED UNAIDED	None
NO. PERSONNEL RESCUED	None

DESCRIBE RESCUE METHODS USED: Six attempted - Helicopter, 1 doctor, 2 crash/fire dispatched to scene within 30 seconds of crash; MB-1, MB-5, with MB5 in lead to create path to scene; MB-1 successful in arriving with crew.

FIRE FIGHTING

FIRST METHOD OF ALARM USED

TWO-WAY RADIO		EMERGENCY INTER-COM.		EMERGENCY PHONE	X
OTHER METHOD (State)	Crash Bell (Alarm)				

TIME RECORD

TIME ALARM RECEIVED	1035
TIME EQUIPMENT ARRIVED	1055

STATION EQUIPMENT

EACH EQUIPMENT AVAILABLE AT INCIDENT		NO. PERSONNEL MANNING EQUIPMENT		QUANTITY EXTINGUISHING AGENTS USED	
TYPE	NO. LOADS USED	MIL.	CIV.	FOAM (gals. conc. used)	OTHER TYPES AND QUANTITIES
MB-1	1	5	-	65	1000 gal. water
MB-5	None	4	-	None	None
MB-2	None	2	-	None	None
MB-2 w/ dry chem. powder unit	1	3	-	NA	40 # Purple K powder

STATION EQUIPMENT OUT OF SERVICE

TYPE	DEFICIENCY	NO. OF DAYS	EXPLAIN DELAYS TO REPAIR
MB-5	Pump strainer casing	20	Part on order

ENCLOSURE (20)

DESCRIPTION OF DIFFICULTIES IN FIRE CONTROL AND EXTINGUISHMENT DUE TO UNUSUAL CONDITIONS OR EQUIPMENT AND/OR AGENT INADEQUACIES

The progress of all equipment was hampered by the unusually heavy undergrowth encountered at the crash scene, and the rapidly spreading fire through the underbrush. Only one piece of equipment (MB-1) was able to get close enough to the crash scene to discharge its foam. As men arrived they were put to work beating out brush fires with pine limbs until a supply of CO_2, shovels and brush beaters arrived. The MB-1 suffered extensive damage in traversing the area.

RECOMMENDATIONS FOR IMPROVEMENTS IN EQUIPMENT AND/OR PROCEDURES TO INCREASE EFFICIENCY

Naval Air Stations located in areas of inaccessible terrain should have special equipment for fire fighting and rescue. Heavy lift helicopter is required that has fire fighting and rescue crew capability. The terrain surrounding NAS Glynco is a wide expanse of timber, palmetto, and swamplands, with few if any egress roads. The only positive method of transportation is via helicopter.

PERCENT DAMAGE BY IMPACT	MONETARY LOSSES (Estimated)	
Immediate area	PERCENT DAMAGE BY FIRE 30% or 1 sq. mi.	LOSS BY SURROUNDING PROPERTY Unknown
DATE 23 Jul 62	PREPARED BY (b) (6) CDR, USN Operations Officer	(b) (6) [redacted]
DATE 23 Jul 62	STATION COMMANDING OFFICER LEO W. EARLY, CAPT, USN	

F-18488

HELICOPTER RESCUE REPORT
OPNAV FORM 3750-12 (REV. 4-59)

OPNAV REPORT 3750-12

INSTRUCTIONS:
1. Mail original and one copy direct to NASC and one copy direct to CNO.
2. Report will be submitted within five working days of rescue or attempted rescue.
3. Serialize by calendar year (e.g., first report for 1959 would be 1-59, second 2-59)
4. Use local time.
5. If exact data is unknown such as time, temperature, etc. give approximate data.
6. Enclosures will be appended to the report if the statement will amplify the data on the form (e.g., Survivor had difficulty due to insufficient training.
7. Refer to the effective edition of OPNAVINST 3750.6

FROM:	REPORT DATE	REPORT SERIAL NO.
Commanding Officer U. S Naval Air Station, Glynco, Ga.	25 Jul 1962	1-62
TO: Commander, U.S. Naval Aviation Safety Center COPY TO: Chief of Naval Operations	HELO. MODEL: HRS-3	BUNO: 129019
		OPERATING BASE: NAS Glynco

DATE OF EMERGENCY	TIME (Local)	LOCATION OF EMERGENCY
23 Jul 1962	1035	3 miles west of NAS Glynco

TIME AND METHOD OF NOTIFICATION OF EMERGENCY	TIME OF ARRIVAL AT SCENE	TIME OF ACTUAL RESCUE	TOTAL ELAPSED FLIGHT TIME
1035 Glynco Crash Circuit	1045	None	1 hr 30 min

HELICOPTER RESCUE PERSONNEL NAME - LAST, FIRST, MIDDLE INITIAL	RANK, RATE	SERVICE/FILE NO.	RESCUE INSTRUCTION FORMAL HRS.	RESCUE INSTRUCTION SQD. HRS.	FORMAL SCHOOL ATTENDED	PICK-UPS A	PICK-UPS S
(b) (6)	LT	(b) (6)	20	50	HTG Elyson	4	100
	ADR1 AN				C/F Personnel		
	AA LT				C/F Personnel Medical Corps		

RESCUED PERSONNEL NAME - LAST, FIRST, MIDDLE INITIAL	RANK, RATE	SERVICE/FILE NO.	AGE	HEIGHT	WEIGHT	INJURY - PHYSICAL CONDITION - SURVIVAL GEAR CLASS (1)	SURVIVAL GEAR USED (Jacket, raft, etc.)
NONE							

NOTE: (1) Physical Condition Code; A - Conscious, B - Conscious, unable to assist, C - Unconscious

RESCUE CONDITIONS AND PROCEDURES

RESCUE SITE WAS OVER	PICK-UP METHOD	IF HOVER, GIVE RPM AND MP WHILE HOISTING	EQUIPMENT USED (Sling, seat, etc.)
[X] LAND [ ] WATER	[ ] SET- NONE [ ] HOVER	NONE RPM. MP	NONE

NUMBER OF PERSONS AT SCENE NOT RESCUED BY HELICOPTER:	REASON NOT RESCUED BY HELICOPTER AND FINAL STATUS	PRIMARY AND SECONDARY MEANS OF LOCATING SURVIVORS (Dyemarker, flare, smoke, etc.)
	NO SURVIVORS	

WIND VEL.	AIR TEMP.	DENSITY ALT.	WATER TEMP.	SEA STATE	GENERAL WEATHER AT SITE
6 kts	88	1700	NA	NA	Clear- 5 miles vis.

MISSION FLOWN BY HELICOPTER PRIOR TO THIS EMERGENCY	BACK-UP MEANS OF RESCUE
NA	Crash fire equipment

RESCUE EQUIPMENT	√ A	√ B	CHECK "A" - CARRIED, NOT USED OR "B" - REQUIRED, NOT AVAILABLE, AND STATE REASON NOT REQUIRED OR IF REQUIRED, WHY NOT AVAILABLE
Sling	X		

RECOMMENDED EQUIPMENT AND TECHNIQUES FOR FUTURE RESCUES OF THIS TYPE (By rescue crew or rescuee)

Air stations that are surrounded by swampland and timber lands, such as NAS Glynco, should be assigned helicopters of heavy lift capability in order to move crews and firefighting equipment into inaccessible areas.

ENCLOSURE(S)
[ ] PILOT'S STATEMENT
[ ] SURVIVOR'S STATEMENT (indicate number, if more than one)

(b) (6)
CDR, USN
By direction

ENCLOSURE (2)

LIST OF ENCLOSURES

1. Autopsy Report on LT Philip R. McHugh USN
2. Autopsy Report on LT James A. Broughton USN
3. Autopsy Report on ANDERSON, Ronald W., ADR3 USN
4. Autopsy Report on CAWTHON, James V., ATCA USN
5. Autopsy Report on MOSELER, Kenneth J., AE2 USN
6. Autopsy Report on WILLIS, Harry C., ADR3 USN
7. The Tape
8. Statement of LT (b) (6) MC USN
9. Statement of (b) (6) SA USN
10. Statement of (b) (6) AC1 USN
11. Statement of (b) (6) ACC USN
12. Statement of (b) (6) AC1 USN
13. Statement of (b) (6) AN USN
14. Statement of (b) (6) AEAN USN
15. Statement of (b) (6) AMH3 USN
16. Statement of (b) (6) CAPT USMC
17. Statement of (b) (6) ACC USN
18. Part VIII of the AAR - The Analysis
19. Comments and Recommendations
20. Part IX of the AAR - Recommendations
21. Wreckage Distribution Diagram
22. Sequence of Events Diagram
23. Fuel System Diagram
24. Photographs (6)

I AM [redacted] AG2 [redacted] USN U.S. NAVAL AIR STATION GLYNCO, GEORGIA, SECTION LEADER ON WATCH FROM 0700 23 JULY 1962 TO 1900 23 JULY 1962.

THE FOLLOWING IS MY STATEMENT OF THE WEATHER CONDITIONS PREVAILING AT THE U.S. NAVAL AIR STATION GLYNCO, GEORGIA AT 1032 HOURS 23 JULY 1962.

SKY CONDITION	7 TENTHS CUMULUS CLOUDS AT AN ESTIMATED 2,000 FEET.
VISIBILITY	7 MILES
SEA LEVEL PRESSURE	30.053 INCHES (1017.7 MB)
STATION PRESSURE	30.021 INCHES
AIR TEMPERATURE	88 DEGREES F.
DEW POINT TEMPERATURE	77 DEGREES F.
RELATIVE HUMIDITY	71%
SURFACE WIND	WEST SOUTH WEST 6 KNOTS
STATE OF GROUND	DRY

RESPECTFULLY,

[redacted] AG2

AG2, USN

FORECASTER ON DUTY:

[redacted] AG-1

AG1, USN

23 JULY 1962

DATE SIGNED

ENCLOSURE (17)

Cwatt 84(IN)

DSH054
SDG032
PP RUCKSH
DE RUCKDG 032
ZNR
RUCKSH ZXY 1
P 071515Z
FM NAS NORVA
TO PATRON SIXTEEN
INFO ZEN/NAVAVNSAFECEN
ZEN/COMNAVAIRLANT
COMFAIRWINGSLANT
COMFAIRWING ELEVEN
ZEN/BUWEPSFLTREADREPLANT
BT
UNCLAS
PRIORITY INVES ENGS PROPS FROM CRASHED P2V-5FS BUNO 131441
A. PATRON SIXTEEN 041539Z
1. RESULTS OF PRELIMINARY INVES OF ENGS PROPS FOLLOWS:
A. STARBOARD ENG SER NR 562840 NO DISCREPANCIES NOT ATTRIBUTED TO CRASH AND FIRE. NO EVIDENCE OF OIL STARVATION. CARBURETOR MANUAL MIXTURE CONTROL IN IDLE CUTOFF.
B. PORT ENGINE SER NR 563482 NO DISCREPANCIES EXCEPT SOME BURNED VALVES. VALVES DELIVERED TO LOCAL MATERIALS LABORATORY FOR ANALYSIS. NO EVIDENCE OF OIL STARVATION. CARBURETOR MANUAL MIXTURE CONTROL

ACT: VP46
ATTN: [illegible]/STD

VP46/JRN.
Bo/1616Z

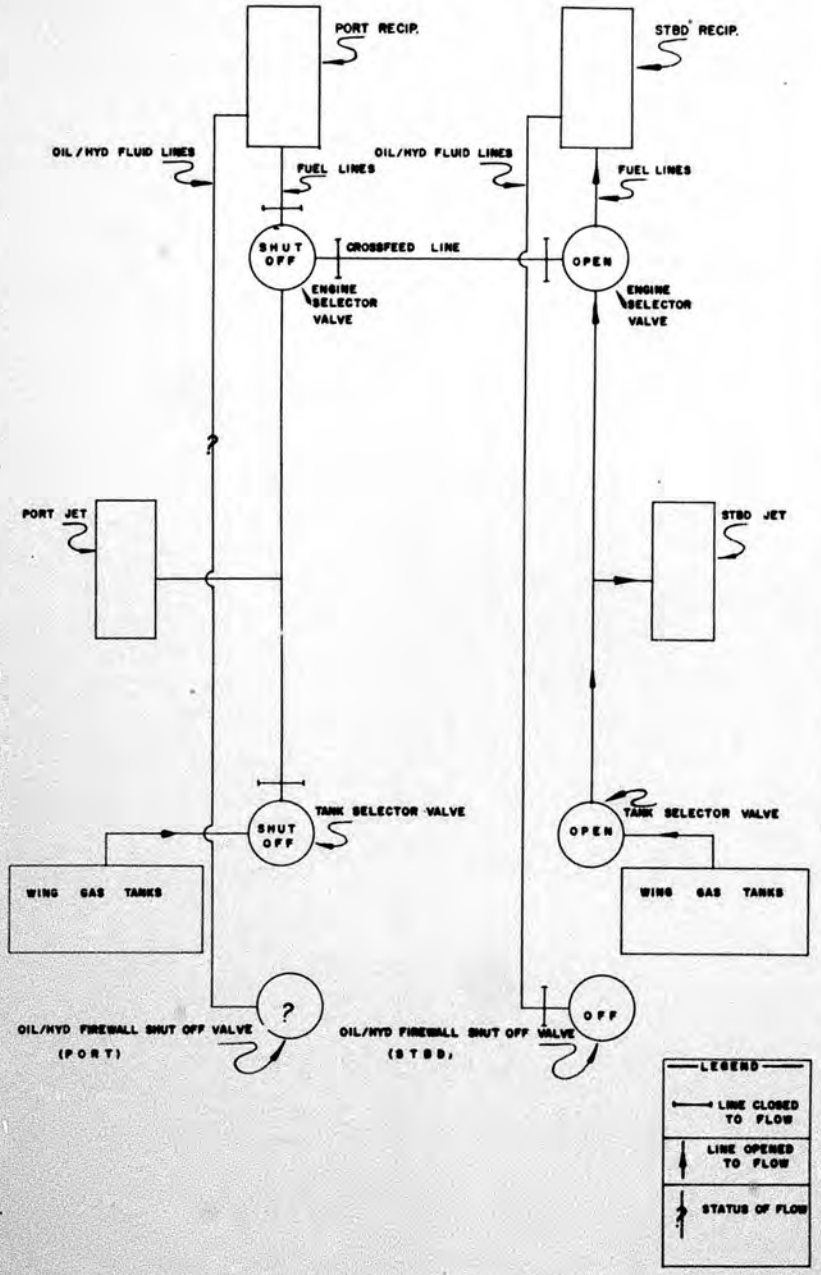
1952 AUG 7 PM 4 11

PAGE TWO RUCKDG
JUST OUT OF NORMAL DETENT. POSITION NOT CONSIDERED SIGNIFICANT.
C. PORT PROPELLER GOVERNOR SER 83941 ELECTRIC HEAD FOUND TO BE SET AT TAKE OFF RPM. IMPOSSIBLE TO DETERMINE IF FEATHERING SYSTEM ACTUATED.
D. PORT PROPELLER SER NR N 183032 DOME SETTING FULL FEATHER AT TIME OF IMPACT. PROP ROTATING SLOWLY. NO INDICATED MALFUNCTION.
E. STARBOARD PROPELLER SER NR N 178592 DOME SETTING FULL LOW PITCH AT IMPACT. NO REASON FOUND PROP. COULD NOT BE FEATHERED. PROP ROTATING UNDER POWER AT IMPACT.
F. BOTH PROP SHAFTS FAILED FROM BENDING.
2. DIR'S WILL FOLLOW.
BT
07/1515Z

ENCLOSURE (18)

FUEL SYSTEM SET UP

RECONSTRUCTED FROM WRECKAGE



ENCLOSURE (19)

ENCL (16)

J 34 WESTINGHOUSE TURBO-JET ENGINE BULLETINS NOT INCORPORATED LIST

Port Ser 200655 Publication No.	Starboard Ser 201614 Publication No.	Title
266A-1	266A-1	THREADED PINS 31H11-1;for retaining the diffuser extension
	279	RETAINING NUT:Modification Turbine 61H197-1
	291A	GEARBOX DRIVE SPLINES;lubrication of
300A-1	300A-1	THERMOCOUPLE CABLE HOLDING BRACKET; (26G845-1)
306		HIGH ENERGY IGNITION UNIT: SNT10-75000-4 WXT 60E732-3
312	312	BEARING HOUSINGS NO. 2&3; modification of
322A-2	322A-2	COMPRESSOR ROTORS;inspection and repair of
323A-2	323A-2	COMPRESSOR ROTORS;inspection and repair of
324A-1	324A-2	COMPRESSOR ROTOR ASSYS 43J966-9, 43J977-6 & 43J463-9; modification to or use
328-1	328-1	ACCESSORY GEARBOX HOUSING 43J754-3
330		STARTER CLUTCH SHAFT 61F364-1; inspection & modification
331-2	331-2	POWER TAKEOFF ASSYS 19E684-4,-5,-6, modification to
332	332	COMPRESSOR BOSS COVERS;106T988-use of
333-1	333-1	SEAL HOUSING;method of drilling slots
334	334	BEARING HOUSINGS Nrs 2 &3 (22E91-9 & 19E904-9) mod to and use of
	335A	LUBRICATING SYSTEM;operating temperatur & oil pressure curves
336-1	336-1	TURBINE ROTOR ASSY;22E273-11,modification to
338A	338A	"T" NUMBER PARTS AND DRAWINGS;index of
339	339	TURBINE;blades-reinspection of spare stock
340-1	340-1	ORIFICE TEE; installation of WXT 107T50
341-1	341-1	LOCKRING;rosan, replacement of
345	345	LOCKPLATES AND TABWASHERS;in specific locations,installation of
348	348	CALIBRATION NOZZLE (243203);rework to enlarge exit area of
351-1	351-1	FUEL CONTROLS(Holley 5805 Series); modification of flyweight assemblies on
352	352	P.T.O. GEAR BOX; minimum axial clearanc P.T.O. gear box to vompressor rotor spline adapter control of
354-1	354-1	TURBINE BLADES; replacement and time coding
355B	355B	NO.1 BEARING; replacement of
360	360	SETSCREW 1st stage nozzle inner shroud, replacement of

ENCLOSURE (16)

Port Ser 200655 Publication No.	Starboard Ser 201614 Publication No.	Title
361		
365	365	FUEL CONTROL FILTER; replacement
367-1	367-1	SECOND-STAGE TURBINE NOZZLE ASSEMBLIES; instr for repair and modification
369	369	ENGINE ACCESSORY RECORD NavAer 418A-1 use of
		DUMP VALVE SEAT; replacement of

Note: The publication numbers that are underlined indicates the portion of the bulletin that had been complied with.

GENERAL GAS TURBINE ENGINE BULLETINS NOT INCORPORATED LIST

Port Engine Ser No. 200655	Starboard Engine Ser No. 201614	Title
30	30	D27(E-2) STARTER FOR USE WITH HEMIS-
33	33	PHERICAL CAP; modification of STARTER: Jack & Heintz modification cleaning & zinc chromate processing
43A	43A	starter Bases STARTER: Jack & heintz D27-1/D27-48
62	62	modification DATA DECALCOMANIA; Performance operating limitations

GENERAL RECIPROCATING ENGINE BULLETINS NOT INCORPORATED LIST

Port Engine Ser No. 563482	Starboard Engine Ser No. 562840	Title
213	213	PROTECTIVE COATING FOR ENGINE PARTS;
214	214	instruction for application of BENDIX BARKER ASSEMBLIES; detail overhaul instr.

R3350 WRIGHT ENGINE BULLETINS NOT INCORPORATED LIST

Port Ser 563482 Publication No.	Starboard Ser 562840 Publication No.	Title
412		
416-1		CARBURATORS: Chandler Evans Model 58-CP811 Bottom Drop Replacement
464A		WATER INJECTION POWER CONTROL UNIT; Permanent elimination of high clutch feature from
468-1	468-1	GENERATOR DRIVE GEAR BUSING; Provision of steel backed, silver plated
502	502	OIL SEAL RING; Stationary reduction gear torque indicator support,provision POWER RECOVERY TURBINE;Nozzle Pylon Support Brace

ENCLOSURE (16)

Port Ser 563482 Publication No.	Starboard Ser 562840 Publication No.	Title
	505-1	POWER RECOVERY WHEEL; with reduced diameter
517-1	517-1	POWER RECOVERY TURBINE SHAFT OIL SHAFT SHIELD DRAIN SLOTS
518	518	PRT; through bolt attachment
570-1		CARBURATOR BELLOWS CASE; Chandler Evans 58-CPB11 flash chrome plating
622A		OIL PUMP DRIVE GEAR WITH SEPARATE JOURNALS
635B		1. POWER RECOVERY TURBINE PRIMARY DRIVE & FLUID COUPLING SUPPORT 2. SPOT-FACING OF POWER RECOVERY TURBINE FLUID COUPLING SUPPORT 3. USED OF SAFETY WIRE IN PLACE OF COTTER PINS
653-1		FRONT OIL PUMP AND SUMP
674A-2	674A-2	MAGNETO, Bendix-Scintilla Model DLN-9
	685	replaceable rear bearing support
691-1	691-1	PROPELLER SHAFT INTAKE PIPE CONNECTOR;Rear cylinder bolted on.
	697	DISTRIBUTION SHIELD CONDUIT
	699	DISTRIBUTION HOUSING, BENDIX SCINTILLA P/N 10-55287Y & 1080681
700	700	WATER INJECTION POWER CONTROL ASS'Y
705	705	SILASTIC MATERIAL ON CYLINDER
706	706	INTERNAL TORQUEMENTER OIL LINE
707	707	PACKING RING, FRONT & REAR THREADED INTAKE PIPE CONNECTOR
708	708	CRANKCASE MAIN SECTION OIL DISTRIBUTING RING CHECK VALVE
	709	GENERATOR DRIVE OIL SEAL
	711	IMPELLER DRIVE; secondary inner and outer pinion shafts
714-1	714-1	CYLINDER AND PISTON ASSEMBLIES
716-1	716-1	CRANKCASE MAIN SECTION
717	717	CAM, FRONT INTAKE & EXHAUST
718		DISTRIBUTOR COLLECTOR & HARNESS CONNECTION PLATES
720		VALVES SPRINGS; rework of raduis on last coil of inner and outer, and incorporated of improved outer
721	721	PISTON REPLACEMENT, INSPECTION AND RECONDITIONING
722	722	VALVE, PRE-OIL AIR BLEED
726	726	IMPELLER DRIVE SECONDARY PINION CARRIER SUPPORT

Note: The publication numbers that are underlined indicates the portion of the bulletin that had been complied with.

ENCLOSURE (16)

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 1
OPNAV FORM 3750-8 (REV. 5-58)
OPNAV REPORT 3750-7
See OPNAVINST. 3750.6C for instructions - SPECIAL HANDLING REQUIRED

SECTION A - IDENTIFICATION

1. FROM *(Name and mailing address of activity)*: Patrol Squadron SIXTEEN, USNAS, Jacksonville 12, Florida
2. MOR NUMBER: 6-62
3. *(Signature of Medical Officer)* [redacted] LT MC USN — DATE: 14 Aug 62
4. FORWARDED *(Name and Signature of Appointing Authority)* [redacted] CDR USN — DATE: 15 Aug 62
5. [X] ACCIDENT [ ] ACCIDENT [ ] INCIDENT
6. TIME AND ZONE: 1044 EST
7. DATE: 23 Jul 62
8. GEOGRAPHICAL LOCATION: NAS Glynco, Ga., 2 mi. west of Runway 7

9. MODEL A/C	10. BUNO	11. NO. OF OCCUPANTS	12. TYPE ACCDT.	13. DAMAGE CODE	14. UNIT OPERATING A/C
P2V-5FS	131441	6	B-2	A	Patrol Squadron SIXTEEN

15. INDIVIDUALS INVOLVED - USE ADDITIONAL SHEETS IF REQUIRED. NAME *(Last, first and middle initials)* IN CONTROL OF A/C	16. UNIT TO WHICH ATTACHED	17. RANK, RATE	18. FILE/SERV. NO.	19. BILLET	20. BRANCH OF SERVICE	21. INJURY CODE	22. DISPOSITION
a. McHugh, Philip R.	VP-16	LT	[redacted]	PPC	USN	A	Y
b. Broughton, James A.	VP-16	LT		Student Pilot	USN	A	Y
c. Anderson, Ronald W.	VP-16	ADR3		Plane Captain	USN	A	Y
d. Cawthon, James V.	VP-16	ATCA		Radio Operator	USN	A	Y
e. Moseler, Kenneth J.	VP-16	AE2	[redacted]	Electrician	USN	A	Y
f. Willis, Harry C.	VP-16	ADR3		Second Mech.	USN	A	Y

23. CLARIFICATION OF ITEMS 15-22 WHEN NECESSARY

24. MODEL - OTHER A/C IF INVOLVED	25. BUNO	26. NO. OF OCCUPANTS	27. UNIT OPERATING A/C	28. DAMAGE CODE	29. REPORT NO.

30. DETAILED NARRATIVE ACCOUNT OF ACCIDENT *(Use additional 8 X 10½ plain sheets if required)*

#30. See The Accident.

SECTION B - MEDICAL OFFICER'S QUESTIONNAIRE

YES	NO	DID THE FLIGHT SURGEON: *(If "NO" state reason in space below.)*
X		1. VISIT THE SCENE OF THE MISHAP?
X		2. PARTICIPATE FULLY IN THE FIELD INVESTIGATION?
X		3. PARTICIPATE FULLY IN THE DELIBERATIONS OF THE A/C ACCIDENT BOARD?

GIVE APPROXIMATE NUMBER OF HOURS SPENT BY THE FLIGHT SURGEON:

4. IN FIELD INVESTIGATION	5. IN BOARD DELIBERATIONS	6. IN PREPARATION OF THIS REPORT
16	30	16

7. REPORT PREPARATION CHECK LIST

[X] ALL PARTS OF FORM COMPLETED [X] SURVIVORS NARRATIVES [X] PHOTOS [X] CONCLUSIONS AND RECOMMENDATIONS [X] REQUIRED COPIES FURNISHED

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-543289

PART V THE ACCIDENT

On 23 July 1962 P2V-5F BUNO 131441 received take off instructions from the control tower, NAS Jacksonville, Florida, and took off at 0835 EST with a crew of six on board. The aircraft had a fuel load of 2300 gallons, with a gross weight of 68,676 pounds. The flight was scheduled as a 6.0 hour local flight on Patrol Squadron SIXTEEN (VP-16) flight schedule for 23 July 1962. The mission as scheduled was to be Instrument 7 (GCA) from the COMFAIRWINGSLANT flight training syllabus. A concurrent mission was to have been an operational and functional check of equipment and systems prior to transfer for induction into the PAR program on 8 August 1962. This was to be done throughout the entire flight and no specific time assigned for this purpose. A pre-transfer flight test sheet was issued to the pilots by the Squadron Quality Control Officer prior to taxi.

After approximately one hour and fifteen minutes of flight the aircraft commenced practice GCA approaches to low passes, in VFR conditions, to runway 25 at NAS Glynco, Brunswick, Georgia. The first three practice approaches were normal in all respects. The fourth approach was a no gyro approach to GCA minimums (100 feet and one quarter mile), and low pass. After the aircraft executed a wave off from this approach witnesses in the vicinity of the airfield observed smoke trailing from the starboard reciprocating engine. The aircraft proceeded down runway 25 at approximately 250 feet of altitude in level flight. Shortly after the aircraft passed the upwind end of the runway a control tower operator, using binoculars, observed the port propeller to go into full feather and stop. The port wing dipped momentarily. The aircraft then proceeded straight ahead, wings level, in a shallow glide and disappeared into the trees. Immediately thereafter a large ball of fire was observed.

The crash occurred at 1044 EST after two hours and nine minutes of flight at approximately two miles beyond the upwind end of runway 25. The estimated aircraft weight at this time was 64,746 pounds. The crash circuit at NAS GLYNCO was energized at 1044 EST by control tower personnel. A rescue helicopter arrived over the crash scene approximately ten minutes later. An MB-1, fire fighting truck, arrived about twenty minutes after the crash, having proceeded through a heavy growth of pine trees, brush, and palmeto, seemingly impenetrable by ground vehicle. At the time that rescue personnel and equipment arrived, the aircraft was engulfed in heavy flames, with no apparent indication of survivors. Rapidly spreading fire through the underbrush hampered attempted rescue operations; however, the MB-1 was able to discharge its full supply of foam over portions of the burning wreckage. The aircraft wreckage was positively identified as BUNO 131441 by the numbers on the vertical stabilizer.

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT—Page 2

OPNAV FORM 3750-8A (Rev. 5-58) OPNAV Report 3750-7

SECTION C—PHYSIOLOGICAL, HUMAN ENGINEERING, DESIGN, SOCIO-PSYCHOLOGICAL AND TRAINING FACTORS WHICH CONTRIBUTED IN SOME DEGREE TO THIS A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT

NAME OF INDIVIDUAL (*Last, first, middle*): McHUGH, Philip R.

MODEL A/C: P2V-5FS

Check E-Established, S-Suspected, or P-Present for each factor selected. Additional 8X10½ plain sheets will be used for the supporting account of items checked below. Identify each statement with the factor and section identification (e.g., C1, C2, etc.). Attach all sheets pertaining to these factors to this form upon completion.

E	S	P	✓ FACTORS
			PHYSIOLOGICAL:
			1. Physically incapacitated in flight
			2. "G" forces
			3. Environmental stress - External
			4. - Internal
			5. Dysbarism/explosive decompression
			6. Diet
			7. Fatigue
			8. Hypoxia
			9. Related illness
			10. Vertigo/Disorientation/Illusions
			11. Hyperventilation
			12. Drugs
			13. Physical state
			14. OTHER:
			HUMAN ENGINEERING AND DESIGN:
			15. Personal equipment
X			16. Displays and/or controls
			17. Work arrangement
			18. Working environment
			19. Habit interference
			20. OTHER:
			SOCIO-PSYCHOLOGICAL: (*Emotional stress from non-duty sources*)
			21. Pregnancy
			22. Illness or death
			23. Arguments
			24. Elated/Depressed state
			25. Personal habits - Drinking
			26. - Sex
			27. - Gambling
			28. - Debts

E	S	P	✓ FACTORS
			SOCIO-PSYCHOLOGICAL: (*Emotional stress from duty sources*)
			29. Expeditings/Delays
			30. Weather
X			31. Mechanical Problems
			32. Social and working relationships
			33. Personal comfort
			34. Regulations
			35. Facilities
			36. Navigation
			37. Duty assignment
			38. Personality traits
			NON-STRESS FACTORS:
			39. Faulty attention
			40. Poor judgement
			41. Forgetfulness
			42. OTHER SOCIO-PSYCHOLOGICAL FACTORS
			TRAINING FACTORS:
			43. Physiological training
			44. Emergency Procedures training
			45. Survival and rescue training
			46. Refresher training
			47. Transition training
			48. OTHER:

SECTION D — AIR CREW DATA (*fill in where applicable*)

1. Flight time past 30 days	48.8	7. Total time in model	1117.2
2. Flight time last 24 hours	2.1	8. Number of days grounded last month, give reason	None
3. Number of flights in last 24 hours	1		
4. Time at controls this flight	Unknown	9. Number of and dates of previous accidents	None
5. Number of hours duty last 24 hours	3		
6. Total flight time	1612.3		

SECTION E — CONTRIBUTING FACTORS AND THEIR ANALYSIS (*As condensed from Part I, Sect. D and Part VIII of the ARR*)

NOTE: Fill in this section only on that set of forms prepared for FIRST individual listed in Section A, i.e. 15(a). Attach additional sheets as necessary.

See Part VIII, AAR, "The Analysis."

☆U. S. GOVERNMENT PRINTING OFFICE: 1960—576966

MEDICAL OFFICER'S REPORT O[illegible] A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 3 OPNAV REPORT 3750-7
OPNAV FORM 3750-8B (5-58)

SECTION F - SAFETY, PERSONAL, AND SURVIVAL EQU[illegible]

Prepare a narrative account of damaged or failed items. Identify each item discussed (e.g., F1, F2, etc.)

NAME OF INDIVIDUAL *(Last, first, middle)*: **McHUGH, Philip R.**

MODEL A/C: **P2V-5FS**

GENERAL DESCRIPTION OF EQUIPMENT	AVAILABLE YES	AVAILABLE NO	SPECIFIC MODEL OR TYPE	UTILIZED YES	UTILIZED NO	FAILED YES	FAILED NO	DESCRIPTION OF DAMAGE TO EQUIPMENT
1. Shoulder harness	X		Type H	X		X		Not found
2. Lap belt	X		NAF 1201-8B	X		X		Not found
3. Inertia reel	X		0-4600-103	X		X		Not found
4. G-Suit		X						
5. Pressure suit-full or partial		X						
6. Exposure suit		X						
7. Flight suit *(Other than above)*	X		Summer Flying	X		X		Burned
8. Helmet	X		DH 51-4	?				Not found
9. Goggles/Eyeshield	X							
10. Shoes	X		Flying Boots	X		X		Burned
11. Gloves	X		Standard Issue					Not found
12. Life vest	X		Mae West		X			Not found
13. Life raft (2)	X		MK VII		X			Not found
14. OTHER:								
15. SIGNAL DEVICE - Flare *(Night)*	X		MK XIII		X			Not found
16. - Flare *(Day)*	X		MK XIII		X			Not found
17. - Dye marker	X		MK XIII		X			Not found
18. - Radio	X		AN/GRT-3		X			Not found
19. - Flashlight	X		Vest Light		X			Not found
20. - Mirror								
21. OTHER:								
22. SURVIVAL GEAR - Knife	X		Standard Issue		X			Not found
23. - First aid kit	X		PSK-11		X			Not found
24. - Shelter								
25. - Food								
26. OTHER:								
27. RESCUE - Vehicle								
28. - Sling, Net, Stretcher								
29. OTHER:								

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE

OXYGEN EQUIPMENT

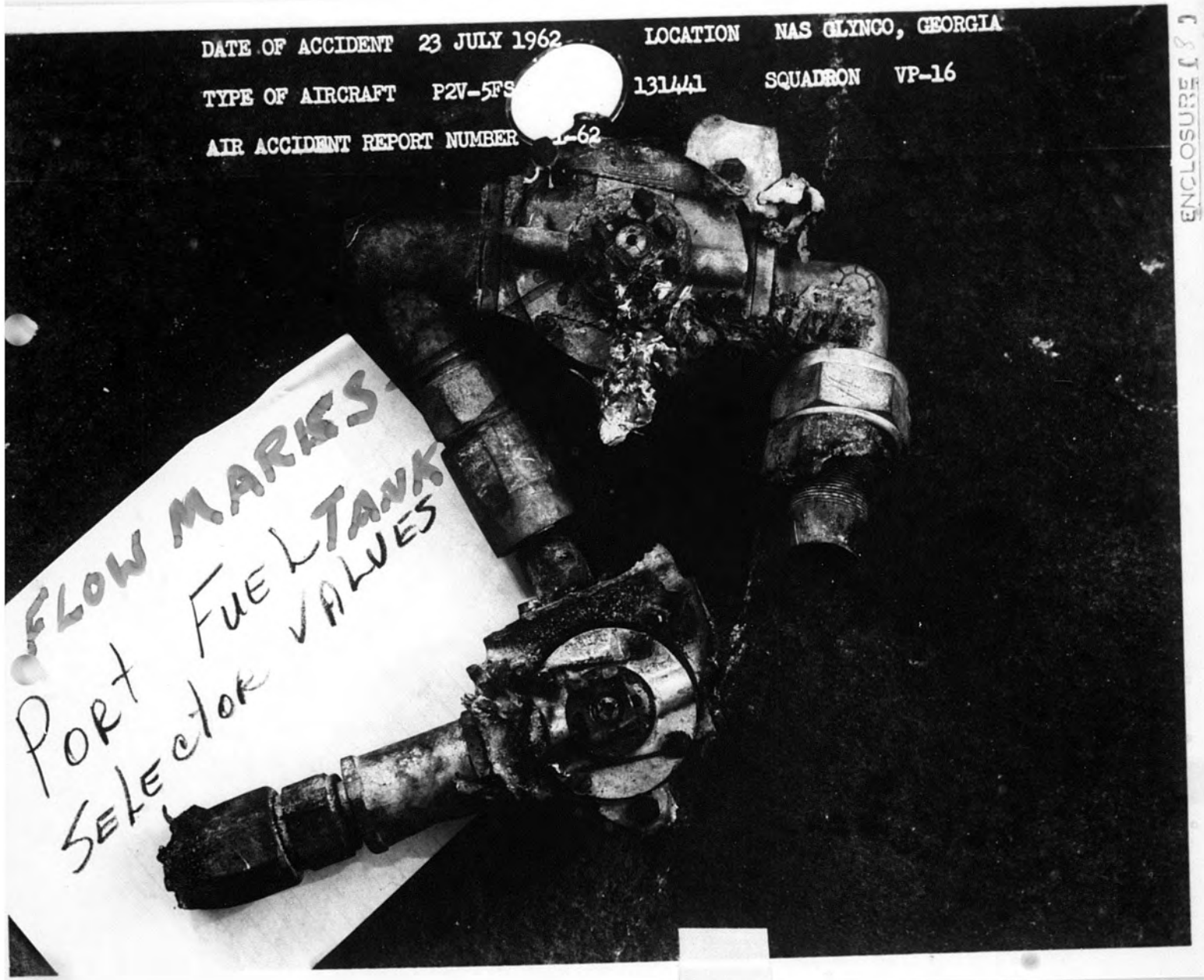
1. MASK - MODEL OR TYPE: **A-13A**
2. MODIFICATIONS, IF ANY: **None**
3. REGULATOR - MODEL OR TYPE: **2872**
4. MODIFICATIONS, IF ANY: **None**
5. PREFLIGHTED BY USER? ☐ YES ☒ NO
6. IF NO, WHY NOT: **Not usual routine in P2V**
7. LIST DISCREPANCIES NOTED BY PREFLIGHT CHECK:
8. OXYGEN SUPPLY: PRIOR TO FLIGHT ____ LITERS *(Liquid)* **1600** P.S.I. *(Gas)*; TIME OF ACCIDENT ____ LITERS *(Liquid)* **1600** P.S.I. *(Gas)*
9. WAS OXYGEN IN USE AT TIME OF ACCDT. ☐ YES ☒ NO
10. IF YES, WAS SELECTOR SETTING ☐ 100% ☐ NORMAL
11. WAS ALL OXYGEN EQUIPMENT NECESSARY FOR THIS FLIGHT AVAILABLE? IF NO, LIST ITEMS AND REASON WHY. ☐ YES ☐ NO
12. WAS OXYGEN MASK REMOVED AT ANY TIME IN FLIGHT? IF YES, GIVE DURATION AND REASON. ☐ NO ☐ YES

RELEASE DEVICES

13. TYPE CHUTE RELEASE DEVICE:
14. TYPE HARNESS RELEASE DEVICE:
15. WHEN WERE RELEASE DEVICES ACTIVATED?
16. WERE DIFFICULTIES ENCOUNTERED WITH RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
17. WERE DIFFICULTIES ENCOUNTERED AFTER ACTIVATING RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
18. WAS LIFE VEST INFLATED PRIOR TO ACTIVATING RELEASE DEVICES? IF YES, WHAT DIFFICULTIES DID THIS PRODUCE? ☐ YES ☐ NO

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-943284

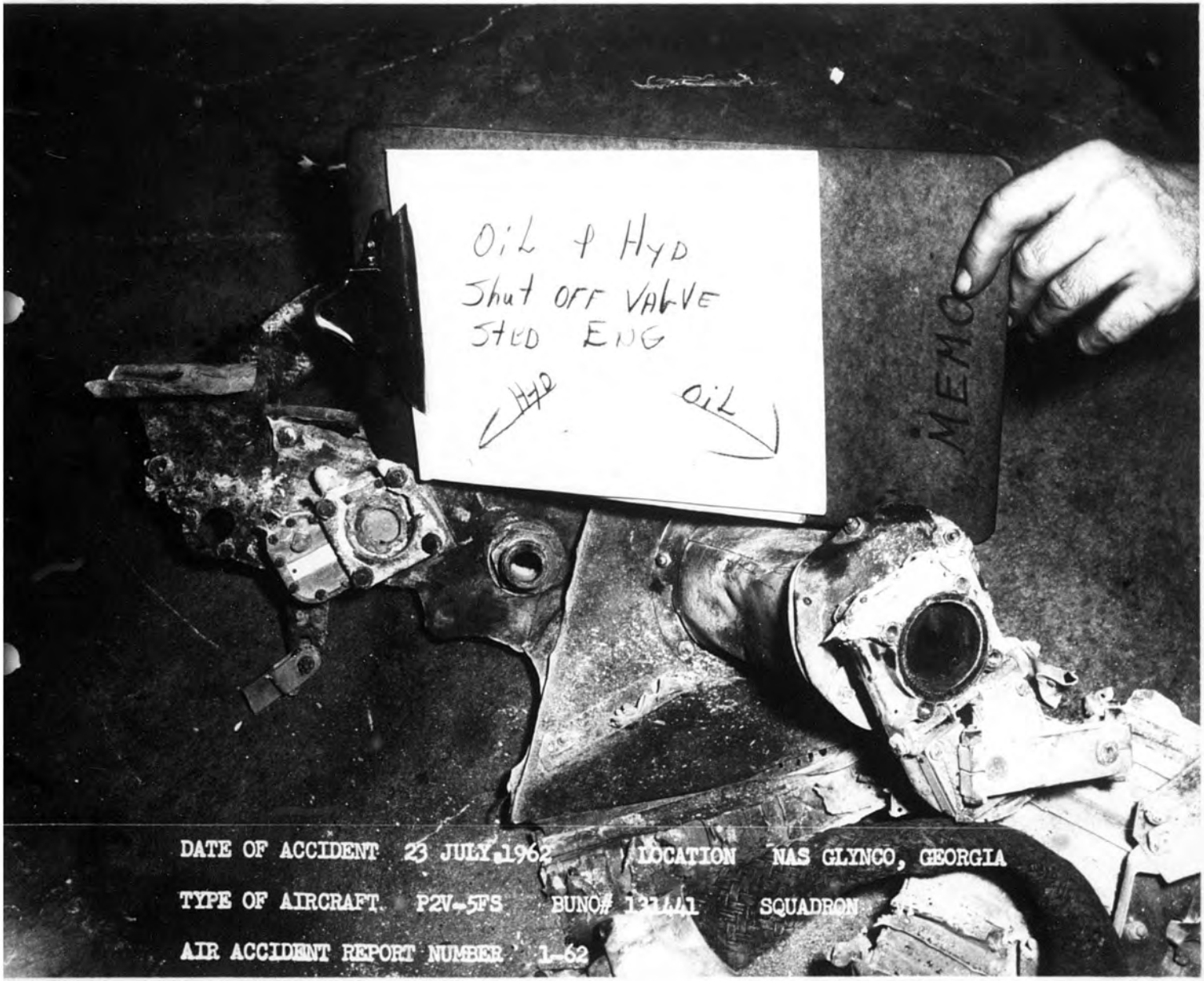
(Continued on OPNAV FORM 3750-8C)


DATE OF ACCIDENT 23 JULY 1962
LOCATION NAS GLYNCO, GEORGIA
TYPE OF AIRCRAFT P2V-5FS
131441
SQUADRON VP-16
AIR ACCIDENT REPORT NUMBER
-62
FLOW MARKS
Port Fuel Tank
Selector Valves

ENCLOSURE (8)

ENCLOSURE (7)

(6) TONE



DATE OF ACCIDENT 23 JULY 1962 LOCATION NAS GLYNCO, GEORGIA

TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 SQUADRON VP

AIR ACCIDENT REPORT NUMBER 1-62

ENCLOSURE (10)

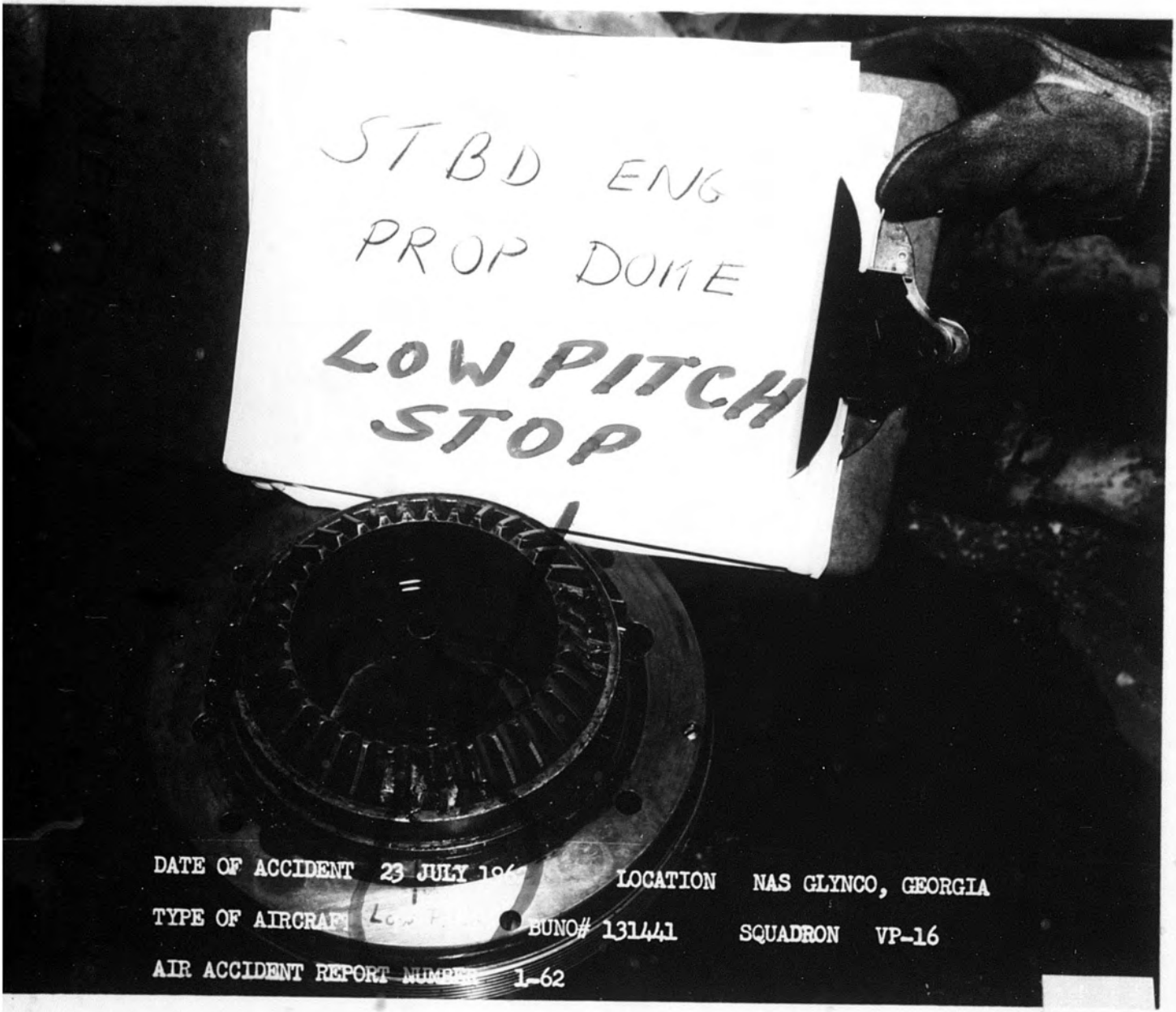
ENCL (10)

DATE OF ACCIDENT 23 JULY 1962 LOCATION NAS GLYNCO, GEORGIA

TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 SQUADRON VP-16

AIR ACCIDENT REPORT NUMBER 1-62

ENCL (11)



DATE OF ACCIDENT 23 JULY 196[illegible] LOCATION NAS GLYNCO, GEORGIA

TYPE OF AIRCRAFT [illegible] BUNO# 131441 SQUADRON VP-16

AIR ACCIDENT REPORT NUMBER 1-62

ENCL (12)

DATE OF ACCIDENT 23 JULY 1962 LOCATION NAS GLYNCO, GEORGIA

TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 SQUADRON VP-16

AIR ACCIDENT REPORT NUMBER 1-62

ENCLOSURE

1001.
port J-t
throttle
Return to

ENCLOSURE (11)

Jet Fuel
Valve Stem
Engine

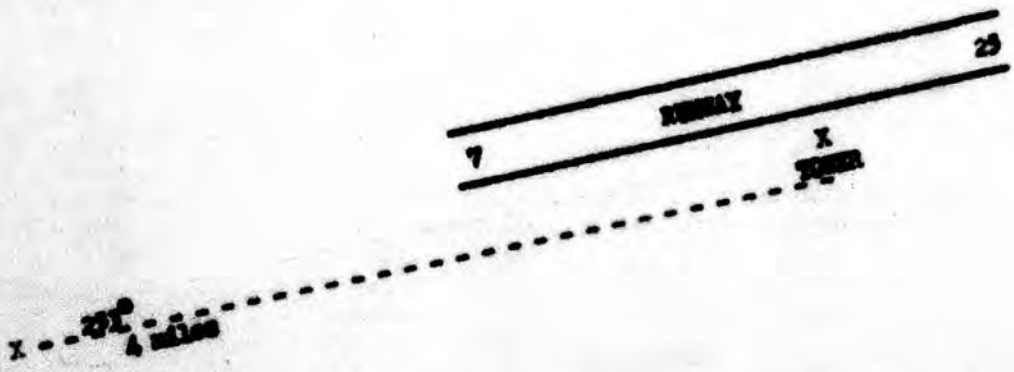
ENCL (15)

ENCLOSURE (20)

ENCLOSURE (20)

DIAGRAM OF INCIDENT SHOWING WIND, DIRECTION, APPROACH OF EQUIPMENT, POSITION OF AIRCRAFT, DISTANCES, ETC.
(Maps and photographs should be included, if significant)

[redacted]



[redacted] attached

ENCLOSURE [20]

FULL DESCRIPTION OF FIREFIGHTING OR PROTECTION AT INCIDENT

1044 Time of crash.
1044:30 Dispatched helicopter with crash rescuemen and doctor aboard.
1044:30 Dispatched 1 MRS Tractor, 1 MB-1.
1046 Dispatched 1 MB-5, 2 MB-2 (Dry chemical unit aboard).

(All times approximate)
1045 Helicopter arrived at scene.
1055 MB-1 arrived at aircraft, discharged foam, and had fire almost out.
1100-1130 Back up crash fire crews arrived, extra assistance, Georgia Forestry Service, NAS structural firefighting equipment (1 unit, bulldozer
1105 Crash fire Officer, crash fire PO, doctor arrived.
1130 50-hand fire fighting party, NAS Security Officer and firefighting equipment arrived (CO_2, shovels, brush beaters, water tanks)
1200 Brunswick Pulp and Paper Corp. equipment, bulldozer and Forestry Service bulldozer, NAS bulldozer, and one piece of private equip;ment provided firebreak and fire control assistance.
1200-1600 Mop up crews, 50-100 hand parties.

MEDICAL OFFICER'S REPORT OF [illegible]C ACCIDENT, INCIDENT, GROUND ACCIDENT - PAGE 4
OPNAV FORM 3750-8C (5-58)

OPNAV REPORT 3750-7

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE *(Continued)*

NAME OF INDIVIDUAL *(Last, first, middle)*: McHUGH, Philip R.

MODEL A/C: P2V-5FS

RESTRAINT HARNESS

19. INTEGRATED HARNESS SYSTEM, MODEL/TYPE

20. INTEGRATED? ☐ FULL ☐ PARTIAL

21. MODIFICATIONS, IF ANY STATE REASON

22. DID INTEGRATED HARNESS FIT PROPERLY? IF NO, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR
☐ NO ☐ YES

23. INTEGRATED HARNESS FITTING WAS CONDUCTED BY:
☐ WEARER ☐ FLIGHT SURGEON ☐ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

24. IF SHOULDER HARNESS WAS USED, WAS IT:
☐ LOCKED ☐ UNLOCKED ☐ TIGHT ☐ SLACK ☐ OTHER CONDITION

HELMET

25. TYPE HELMET: DH51-4

26. LIST PRESCRIBED MODIFICATIONS: None

27. OTHER MODIFICATIONS AND REASON FOR THEM

28. DID HELMET FIT PROPERLY? IF NO, GIVE REASON
☒ YES ☐ NO

29. HELMET FITTING WAS CONDUCTED BY:
☒ WEARER ☐ FLIGHT SURGEON ☒ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

PARACHUTE

30. TYPE CHUTE: N3CR

31. LAST PACKING DATE: 7-12-62

32. MODEL/TYPE BAILOUT OXYGEN

33. AUTOMATIC RIPCORD, IF INSTALLED *(Model and type)*
☐ NONE

34. DID AUTOMATIC RIPCORD FAIL? IF YES, WHY?
☐ NO

35. WAS RIPCORD ACTIVATION
☐ MANUAL ☐ AUTOMATIC?

36. IF MANUALLY ACTIVATED STATE REASON AND ANY DIFFICULTIES ENCOUNTERED

37. DID CHUTE OPEN IMMEDIATELY? IF NO, GIVE REASON
☐ YES ☐ NO

38. ALTITUDE THAT CHUTE OPENED
FEET

39. OPENING SHOCK WAS:
☐ SLIGHT ☐ MODERATE ☐ SEVERE

40. BODY ATTITUDE AT OPENING

41. CONDITION OF CHUTE AFTER OPENING

42. CHUTE OSCILLATION PRESENT:
☐ NONE ☐ SLIGHT ☐ MODERATE ☐ SEVERE

43. IF OSCILLATION WAS PRESENT, HOW WAS IT STOPPED?

44. WEATHER CONDITIONS DURING DESCENT *(List in sequence)*

45. TOPOGRAPHY OF LANDING SITE

46. WAS BAILOUT OXYGEN CONNECTED?
☐ BEFORE EXIT ☐ AFTER EXIT ☐ NO ☐ N.A.

47. WAS BAILOUT OXYGEN USED? IF NOT, WHY
☐ YES ☐ NO

48. WHEN WAS IT ACTIVATED?
☐ BEFORE EXIT ☐ AFTER EXIT

49. GIVE DIFFICULTIES ENCOUNTERED WITH BAILOUT OXYGEN AND THEIR CAUSE, IF ANY

50. WAS CHUTE HARNESS
☐ TIGHT ☐ SNUG ☐ LOOSE

51. WAS A SITTING POSITION IN SLING OBTAINED DURING DESCENT? IF NOT, WHY?
☐ NO ☐ YES ☐ NOT ATTEMPTED

52. SEAT CUSHION IF PROVIDED *(Model/Type)*
☐ NONE

53. WAS PARARAFT LANYARD CONNECTED TO LIFE VEST D RING? IF NOT, WHY?
☐ NO ☐ YES

54. LIST TYPE OF PARACHUTE TRAINING COMPLETED BY THIS INDIVIDUAL
☐ NONE Lectures and demonstrations

55. IF ATTEMPT WAS MADE TO RELEASE PARARAFT DURING DESCENT, WAS RELEASE ACTIVATED SUCCESSFULLY?
☐ YES ☐ NO

56. IF NO, GIVE REASON

OTHER

57. IF G-SUIT, EXPOSURE SUIT, FULL OR PARTIAL PRESSURE SUIT WAS WORN, DID IT FIT PROPERLY? IF NOT, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR.
☐ YES ☐ NO

58. WAS G-SUIT EQUIPPED WITH A SPRING-LOADED DISCONNECT ADAPTER? IF NO, GIVE REASON
☐ YES ☐ NO

59. LIST ALL ITEMS OF NON-STANDARD CLOTHING OR SURVIVAL EQUIPMENT UTILIZED

60. WAS ANY ITEM OF EQUIPMENT LOST? IF YES STATE ITEM, WHEN LOST, AND REASON FOR LOSS.
☐ NO ☐ YES

61. WAS ANY ITEM OF EQUIPMENT DISCARDED? IF YES, STATE ITEM, WHEN DISCARDED, AND REASON FOR DISCARD.
☐ NO ☐ YES

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498197

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT – PAGE 5

OPNAV FORM 3750-8D (REV. 5-58)

OPNAV REPORT 3750-7

SECTION H - EMERGENCY EXIT FROM A/C AND SURVIVAL FACTORS

NAME OF INDIVIDUAL *(Last, first, middle)*

McHUGH, Philip R.

MODEL A/C

P2V-5FS

S	E	S-SUSPECTED, E-ESTABLISHED	REMARKS
		1. EJECTION - Attempted	
		2. - Accomplished	
		3. - Through canopy	
YES	NO	EJECTION DIFFICULTIES ENCOUNTERED	IF YES, EXPLAIN DIFFICULTIES
		4. - Prior to	
		5. - During	
		6. - Subsequent to	
		7. Give type and model of seat used	
		8. BAILOUT - Attempted	
		- Accomplished	

9. ALTITUDE AT TIME OF EXIT *(feet)*

ABOVE SEA LEVEL _____ ABOVE TOPOGRAPHY _____

10. ATTITUDE OR MANEUVER OF A/C AT EXIT OR IMPACT

Wings level, slight nose high

11. AIRSPEED

90-110 knots

12. COLLISION OF A/C WITH: [X] GROUND [ ] WATER

13. CONTROLLED? [X] YES [ ] NO [ ] UNKNOWN

14. POWER: [X] ON [ ] OFF

15. WHEELS: [X] UP [ ] DOWN

16. FLAPS: [ ] FULL [X] UP [ ] PARTIAL

17. CANOPY POSITION AT EXIT OR IMPACT: [ ] OPEN [ ] CLOSED [ ] JETTISONED

18. SEA STATE

19. AIR TEMP. 88 °F

20. WATER TEMP. °F

21. A/C FLOATED SEC.

22. TIME IN WATER

23. TIME IN RAFT

BAIL OUT OR COLLISION WITH WATER OR GROUND

24. EXIT USED: None

25. IS THIS THE RECOMMENDED EXIT? IF NO STATE REASON FOR CHOICE. [ ] YES [ ] NO

26. DIFFICULTIES WITH THIS EXIT WERE: [ ] IN REACHING [ ] IN OPENING [ ] IN EXITING

27. STATE NATURE OF DIFFICULTY

28. BODY POSITION DURING EXIT

29. LIST OTHER FACTORS NOT INDICATED ABOVE WHICH AFFECTED EXIT FROM A/C

Fatal injuries on impact with ground.

SURVIVAL FACTORS: Check factors below which are appropriate for this accident. Prepare a detailed narrative account of the factors checked below and attach to this form. Identify each item discussed by item number (e.g., H30, H31, etc.)

COMMUNICATIONS:
- [ ] 30. Communicated position prior to mishap
- [ ] 31. Witnesses at scene
- [ ] 32. Electronic signal devices
- [ ] 33. Visual signal devices
- [ ] 34. Auditory signal devices
- [ ] 35. OTHER:

TRAVEL:
- [ ] 36. LAND
- [ ] 37. WATER

SHELTER:
- [ ] 38. Life raft
- [ ] 39. Parachute
- [ ] 40. A/C structure
- [ ] 41. Natural shelter
- [ ] 42. Man-made shelter
- [ ] 43. OTHER:

WATER SOURCE:
- [ ] 44. Desalter kit, seawater or solar still
- [ ] 45. Rain, dew, snow, ice, etc.
- [ ] 46. Processed beverages
- [ ] 47. Canteen, thermos, water breaker, etc.
- [ ] 48. Streams, ponds, wells, etc.
- [ ] 49. OTHER:

MAINTAINING BODY TEMPERATURE:
- [ ] 50. Items used as shelter
- [ ] 51. Items used as clothing
- [ ] 52. Fire
- [ ] 53. OTHER:

ENVIRONMENTAL HAZARDS:
- [ ] 54. Exposure to natural forces
- [ ] 55. Exposure to dangerous animals and plants
- [ ] 56. Unfriendly native population
- [ ] 57. OTHER:

MORALE:
- [ ] 58. Isolation
- [ ] 59. Psychological shock
- [ ] 60. Lack of motivation to survive
- [ ] 61. Boredom
- [ ] 62. Rationing, activities, and group coordination
- [ ] 63. OTHER:

FOOD SOURCE:
- [ ] 64. Prepared survival rations
- [ ] 65. Animals/plants
- [ ] 66. OTHER:

SURVIVAL TRAINING RECEIVED PRIOR TO MISHAP:
- [ ] 67.

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-876382

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 6

OPNAV FORM 3750-8E (Rev. 5-58)

OPNAV REPORT 3750-7

SECTION I - PATHOLOGICAL FACTORS (Use A to denote ANTE MORTEM; P for POST MORTEM, when known and applicable.)

1. NAME OF INDIVIDUAL (Last, first, middle): **McHUGH, Philip R.**

MODEL A/C: **P2V-5FS**

2. AGE	3. HEIGHT	4. WEIGHT	5. LOCATION AND DIRECTION FACING AT TIME OF ACCIDENT	6. INJURY CODE
30	72 INCHES	178	Right Pilot Seat	A

7. UNCONSCIOUSNESS: [ ] SHORT DURATION LITTLE SIGNIFICANCE [ ] OTHER (give time)

8. INTERNAL INJURIES (Non-fatal cases)

HEAD INJURIES

9. CEREBRAL CONCUSSION: [ ] MINOR [ ] SERIOUS [ ] CRITICAL [X] FATAL

10. FACIAL INJURIES (n.e.c.): Charring

11. INTRA-ORAL INJURIES: Multiple fractures

12. MINOR EYE INJURIES: [ ] RIGHT [ ] LEFT

13. MAJOR EYE INJURIES: [X] RIGHT [X] LEFT

14. TYPE OF FRACTURE / DISLOCATION

	SKULL		VERTEBRAE (Specify No.)					SHOULDER GIRDLE	RIBS	PELVIS	UPPER ARM		LOWER ARM		HAND		UPPER LEG		LOWER LEG		FOOT	
	CRAN.	FACIAL	CERV.	THOR.	LUMBAR	SACRAL	COCCYX				R	L	R	L	R	L	R	L	R	L	R	L
SIMPLE																						
COMPOUND																						
COMMINUTED									X	X												
DISLOCATION		JAW									SHOULDER		ELBOW		WRIST		HIP		KNEE		ANKLE	
		X													HAND						FOOT	

15. AMPUTATIONS/AVULSIONS (State Parts): **Both lower arms and legs**

16. LIST PRE-EXISTING PHYSICAL DEFECTS PRESENT AT TIME OF POST CRASH EXAMINATION: **None**

17. SOFT TISSUE INJURIES

		LACERATIONS			CONTUSION/SPRAIN/STRAIN			ABRASIONS		
		MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE
HEAD (n.e.c.)	VENTRAL									
	DORSAL									
NECK										
THORAX	VENTRAL									
	DORSAL									
ABDOMEN	VENTRAL									
	DORSAL									
EXTREMITIES	UPPER									
	LOWER									

18. [ ] DROWNED

19. [ ] ASPHYXIATED

20. SHOCK: [ ] MILD [ ] MODERATE [X] SEVERE

21. EXPOSURE: [ ] MILD [ ] MODERATE [X] SEVERE

22. [X] BURNS [ ] FROST BITE

DEGREE	1ST	2ND	3RD	1ST	2ND	3RD	1ST	2ND	3RD
			X			X			X

AREA	HEAD (ventral)	Dorsal)	TRUNK (ventral	Dorsal)	ARMS	LEGS
	X	X	X	X	X	X

23. EXTENT OF CARBONIZATION: [ ] NONE [X] COMPLETE (almost)

ARE TISSUE SPECIMENS OBTAINABLE? [X] YES [ ] NO

NOTE: Attach a detailed narrative account of injuries, cause, structures causing injury, magnitudes of force, and include whether ANTE- OR POST-MORTEM if determined. It is necessary to give as clear a picture of injury cause and sequence as possible.

24. ADMITTED TO SICK LIST? IF YES, GIVE DIAGNOSIS: [X] YES [ ] NO **for record purpose only**

25. DIAGNOSIS NO. (NAVMED P-1294)

26. ESTIMATED STAY ON SICK LIST: DAYS

27. GROUNDED? IF YES GIVE REASON: [ ] YES [X] NO

28. ESTIMATED DURATION: DAYS

29. PRIMARY CAUSE OF DEATH (Use Basic Diagnostic Nomenclature, NAVMED P-1294): **Injuries, multiple, extreme** NO. 8651

30. SECONDARY CAUSE OF DEATH: **Burn, NEC, 100%, 3°** NO. 8403

31. AUTOPSY PERFORMED? [X] YES [ ] NO

32. PROTOCOL: [X] ATTACHED [ ] WILL BE FORWARDED

33. AUTOPSY CONDUCTED BY: [X] PATHOLOGIST [ ] FLIGHT SURGEON

IF FLIGHT SURGEON DOES AUTOPSY USE "AUTOPSY GUIDE FOR A/C ACCIDENT FATALITIES", AFIP, 1957.

34. SPECIMEN	TEST PERFORMED	RESULTS	SPECIMEN	TEST PERFORMED	RESULTS
BLOOD: 1			TISSUE: (CNS)		
2			- MUSCLE		
3			- VISCERA		
URINE			OTHER:		
G-I CONTENTS					

35. IF ULTRAVIOLET LIGHT OR OTHER SPECIALIZED INVESTIGATIVE PROCEDURES WERE USED AT THE MISHAP SITE OR AUTOPSY, LIST THEM IN THIS SPACE. FOR EACH ENTRY IN THIS SPACE A NARRATIVE ACCOUNT OF THEIR RESULTS AND INTERPRETATION WILL BE ATTACHED.

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498198

D-58978

AUTOPSY: A-80-62

Name: McHUGH, Phillip Raymond Jr.
Race: Caucasian
Died: 7-23-62, 1044

Age: 29
Sex: Male
Autopsy: 9-23-62, 1000

CLINICAL SUMMARY: The person on whom this post-mortem examination is performed was the command pilot of a Navy P2V patrol bomber which crashed near NAS, Glynco, Georgia on 7-23-62. The plane was making practice landings in association with the GCA School at NAS, Glynco. The plane took a wave-off, began to accelerate, then apparently stalled and crashed approximately 4 miles from the landing strip. Indirect and hearsay information indicates that the plane acted as if a motor lost its power and precipitated a stall which caused the crash. The plane burned totally with all occupants inside the craft. Identification of these remains have been established by dental chart evaluations as well as by positions in the aircraft. Identification was carried out by the attending flight surgeon, Doctor Flack of NAS, Jacksonville and a dentist who is not known to this prosector.

EXTERNAL EXAMINATION:

(b) (6)

[redacted]

TOXICOLOGY:

(b) (6)

[redacted]

PHOTOGRAPHS: Photographs of this and other bodies involved in this plane crash were obtained by Fleet Air Photographic Laboratory, NAS, Jacksonville.

(Cont'd):

AUTOPSY: A-80-62 Name: McHUGH, Phillip Raymond Jr.

GROSS FINDINGS:

INJURIES, MULTIPLE, EXTREME.

1. (b) (6) [redacted]
2.
3.
4.

CAUSE OF DEATH: Injuries, multiple, extreme (aircraft accident)

(b) (6) [redacted]
LCDR MC USN

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 2

OPNAV FORM 3750-0A (Rev. 5-58)

OPNAV REPORT 3750-7

SECTION C - PHYSIOLOGICAL, HUMAN ENGINEERING, DESIGN, SOCIO-PSYCHOLOGICAL, AND TRAINING FACTORS WHICH CONTRIBUTED IN SOME DEGREE TO THIS A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT

NAME OF INDIVIDUAL (Last, first, middle): **BROUGHTON, James A.**

MODEL A/C: **P2V-5FS**

Check E-Established, S-Suspected, or P-Present for each factor selected. Additional 8X10½ plain sheets will be used for the supporting account of items checked below. Identify each statement with the factor and section identification (e.g., C1, C2, etc.). Attach all sheets pertaining to these factors to this form upon completion.

E	S	P	✓ FACTORS
			PHYSIOLOGICAL:
			1. Physically incapacitated in flight
			2. "G" forces
			3. Environmental stress - External
			4. - Internal
			5. Dysbarism/explosive decompression
			6. Diet
			7. Fatigue
			8. Hypoxia
			9. Related illness
			10. Vertigo/Disorientation/Illusions
			11. Hyperventilation
			12. Drugs
			13. Physical state
			14. OTHER:
			HUMAN ENGINEERING AND DESIGN:
			15. Personal equipment
		X	16. Displays and/or controls
			17. Work arrangement
			18. Working environment
			19. Habit interference
			20. OTHER:
			SOCIO-PSYCHOLOGICAL: (Emotional stress from non-duty sources)
			21. Pregnancy
			22. Illness or death
			23. Arguments
			24. Elated/Depressed state
			25. Personal habits - Drinking
			26. - Sex
			27. - Gambling
			28. - Debts

E	S	P	✓ FACTORS
			SOCIO-PSYCHOLOGICAL: (Emotional stress from duty sources)
			29. Expeditings/Delays
			30. Weather
X			31. Mechanical Problems
			32. Social and working relationships
			33. Personal comfort
			34. Regulations
			35. Facilities
			36. Navigation
			37. Duty assignment
			38. Personality traits
			NON-STRESS FACTORS:
			39. Faulty attention
			40. Poor judgement
			41. Forgetfulness
			42. OTHER SOCIO-PSYCHOLOGICAL FACTORS
			TRAINING FACTORS:
			43. Physiological training
			44. Emergency Procedures training
			45. Survival and rescue training
			46. Refresher training
			47. Transition training
			48. OTHER:

SECTION D - AIR CREW DATA (fill in where applicable)

1. Flight time past 30 days	49.5
2. Flight time last 24 hours	2.1
3. Number of flights in last 24 hours	1
4. Time at controls this flight	Unknown
5. Number of hours duty last 24 hours	0
6. Total flight time	3058.6
7. Total time in model	418.6
8. Number of days grounded last month, give reason	None
9. Number of and dates of previous accidents	None

SECTION E - CONTRIBUTING FACTORS AND THEIR ANALYSES (As condensed from Part I, Sect. D and Part VIII of the AAR)

NOTE: Fill in this section only on that set of forms prepared for FIRST individual liated in Section A, i.e. 15(a). Attach additional sheets as necessary.

See Part VIII, AAR, "The Analysis."

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498194

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT – PAGE 3
OPNAV FORM 3750-8B (5-58) OPNAV REPORT 3750-7

SECTION F - SAFETY, PERSONAL, AND SURVIVAL EQUIPMENT

Prepare a narrative account of damaged or failed items. Identify each item discussed (e.g., F1, F2, etc.)

NAME OF INDIVIDUAL *(Last, first, middle)*: **BROUGHTON, James A.**

MODEL A/C: **P2V-5FS**

GENERAL DESCRIPTION OF EQUIPMENT	AVAILABLE YES	AVAILABLE NO	SPECIFIC MODEL OR TYPE	UTILIZED YES	UTILIZED NO	FAILED YES	FAILED NO	DESCRIPTION OF DAMAGE TO EQUIPMENT
1. Shoulder harness	X		Type H	X		X		Burned
2. Lap belt	X		NAF 1201-8B	X		X		Fastened buckle found
3. Inertia reel	X		0-4600-103	X		X		but remainder of seat
4. G-Suit		X						belt burned.
5. Pressure suit-full or partial		X						
6. Exposure suit		X						
7. Flight suit *(Other than above)*	X		Summer Flying	X				
8. Helmet	X		Helicopter	X		X		Burned
9. Goggles/Eyeshield	X							Earphones found, the
10. Shoes	X		Flying Boots	X		X		remainder burned.
11. Gloves	X		Standard Issue	X		X		Burned
12. Life vest	X		Mae West		X			Not found
13. Life raft (2)	X		MK VII		X			Not found
14. OTHER:					X			Not found
15. SIGNAL DEVICE - Flare *(Night)*	X		MK XIII					
16. - Flare *(Day)*	X		MK XIII		X			Not found
17. - Dye marker	X		MK XIII		X			Not found
18. - Radio	X		AN/GRT-3		X			Not found
19. - Flashlight	X		Vest Light		X			Not found
20. - Mirror					X			Not found
21. OTHER:								
22. SURVIVAL GEAR - Knife	X		Standard Issue					
23. - First aid kit	X		PSK-11					Not found
24. - Shelter								Not found
25. - Food								
26. OTHER:								
27. RESCUE - Vehicle								
28. - Sling, Net, Stretcher								
29. OTHER:								

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE

OXYGEN EQUIPMENT

1. MASK - MODEL OR TYPE: **A-13A**
2. MODIFICATIONS, IF ANY: **None**
3. REGULATOR - MODEL OR TYPE: **2872**
4. MODIFICATIONS, IF ANY: **None**
5. PREFLIGHTED BY USER? ☐ YES ☒ NO
6. IF NO, WHY NOT: **Not usual routine in P2V**
7. LIST DISCREPANCIES NOTED BY PREFLIGHT CHECK:
8. OXYGEN SUPPLY: PRIOR TO FLIGHT ____ LITERS *(Liquid)* **1600** P.S.I. *(Gas)*; TIME OF ACCIDENT ____ LITERS *(Liquid)* **1600** P.S.I. *(Gas)*
9. WAS OXYGEN IN USE AT TIME OF ACCDT. ☐ YES ☒ NO
10. IF YES, WAS SELECTOR SETTING ☐ 100% ☐ NORMAL
11. WAS ALL OXYGEN EQUIPMENT NECESSARY FOR THIS FLIGHT AVAILABLE? IF NO, LIST ITEMS AND REASON WHY. ☐ YES ☐ NO
12. WAS OXYGEN MASK REMOVED AT ANY TIME IN FLIGHT? IF YES, GIVE DURATION AND REASON. ☐ NO ☐ YES

RELEASE DEVICES

13. TYPE CHUTE RELEASE DEVICE
14. TYPE HARNESS RELEASE DEVICE
15. WHEN WERE RELEASE DEVICES ACTIVATED?
16. WERE DIFFICULTIES ENCOUNTERED WITH RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
17. WERE DIFFICULTIES ENCOUNTERED AFTER ACTIVATING RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
18. WAS LIFE VEST INFLATED PRIOR TO ACTIVATING RELEASE DEVICES? IF YES, WHAT DIFFICULTIES DID THIS PRODUCE? ☐ YES ☐ NO

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-543284

(Continued on OPNAV FORM 3750-8C)

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, GROUND ACCIDENT - PAGE 4
OPNAV FORM 3750-8C (5-58)

OPNAV REPORT 3750-7

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE (Continued)

NAME OF INDIVIDUAL (Last, first, middle): BROUGHTON, James A.

MODEL A/C: P2V-5FS

RESTRAINT HARNESS

19. INTEGRATED HARNESS SYSTEM, MODEL/TYPE:

20. INTEGRATED? ☐ FULL ☐ PARTIAL

21. MODIFICATIONS, IF ANY STATE REASON:

22. DID INTEGRATED HARNESS FIT PROPERLY? IF NO, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR
☐ NO ☐ YES

23. INTEGRATED HARNESS FITTING WAS CONDUCTED BY:
☐ WEARER ☐ FLIGHT SURGEON ☐ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

24. IF SHOULDER HARNESS WAS USED, WAS IT:
☐ LOCKED ☐ UNLOCKED ☐ TIGHT ☐ SLACK ☐ OTHER CONDITION

HELMET

25. TYPE HELMET: Helicopter

26. LIST PRESCRIBED MODIFICATIONS:

27. OTHER MODIFICATIONS AND REASON FOR THEM:

28. DID HELMET FIT PROPERLY? IF NO, GIVE REASON
☒ YES ☐ NO

29. HELMET FITTING WAS CONDUCTED BY:
☒ WEARER ☐ FLIGHT SURGEON ☒ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

PARACHUTE

30. TYPE CHUTE: N3CR

31. LAST PACKING DATE: 7-12-62

32. MODEL/TYPE BAILOUT OXYGEN:

33. AUTOMATIC RIPCORD, IF INSTALLED (Model and type)
☐ NONE

34. DID AUTOMATIC RIPCORD FAIL? IF YES, WHY?
☐ NO

35. WAS RIPCORD ACTIVATION
☐ MANUAL ☐ AUTOMATIC?

36. IF MANUALLY ACTIVATED STATE REASON AND ANY DIFFICULTIES ENCOUNTERED:

37. DID CHUTE OPEN IMMEDIATELY? IF NO, GIVE REASON
☐ YES ☐ NO

38. ALTITUDE THAT CHUTE OPENED
FEET

39. OPENING SHOCK WAS:
☐ SLIGHT ☐ MODERATE ☐ SEVERE

40. BODY ATTITUDE AT OPENING:

41. CONDITION OF CHUTE AFTER OPENING:

42. CHUTE OSCILLATION PRESENT:
☐ NONE ☐ SLIGHT ☐ MODERATE ☐ SEVERE

43. IF OSCILLATION WAS PRESENT, HOW WAS IT STOPPED?

44. WEATHER CONDITIONS DURING DESCENT (List in sequence):

45. TOPOGRAPHY OF LANDING SITE:

46. WAS BAILOUT OXYGEN CONNECTED?
☐ BEFORE EXIT ☐ AFTER EXIT ☐ NO ☐ N.A.

47. WAS BAILOUT OXYGEN USED? IF NOT, WHY
☐ YES ☐ NO

48. WHEN WAS IT ACTIVATED?
☐ BEFORE EXIT ☐ AFTER EXIT

49. GIVE DIFFICULTIES ENCOUNTERED WITH BAILOUT OXYGEN AND THEIR CAUSE, IF ANY:

50. WAS CHUTE HARNESS
☐ TIGHT ☐ SNUG ☐ LOOSE

51. WAS A SITTING POSITION IN SLING OBTAINED DURING DESCENT? IF NOT, WHY?
☐ NO ☐ YES ☐ NOT ATTEMPTED

52. SEAT CUSHION IF PROVIDED (Model/Type)
☐ NONE

53. WAS PARARAFT LANYARD CONNECTED TO LIFE VEST D RING? IF NOT, WHY?
☐ NO ☐ YES

54. LIST TYPE OF PARACHUTE TRAINING COMPLETED BY THIS INDIVIDUAL
☐ NONE Lectures and demonstrations

55. IF ATTEMPT WAS MADE TO RELEASE PARARAFT DURING DESCENT, WAS RELEASE ACTIVATED SUCCESSFULLY?
☐ YES ☐ NO

56. IF NO, GIVE REASON:

OTHER

57. IF G-SUIT, EXPOSURE SUIT, FULL OR PARTIAL PRESSURE SUIT WAS WORN, DID IT FIT PROPERLY? IF NOT, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR.
☐ YES ☐ NO

58. WAS G-SUIT EQUIPPED WITH A SPRING-LOADED DISCONNECT ADAPTER? IF NO, GIVE REASON
☐ YES ☐ NO

59. LIST ALL ITEMS OF NON-STANDARD CLOTHING OR SURVIVAL EQUIPMENT UTILIZED:

60. WAS ANY ITEM OF EQUIPMENT LOST? IF YES STATE ITEM, WHEN LOST, AND REASON FOR LOSS.
☐ NO ☐ YES

61. WAS ANY ITEM OF EQUIPMENT DISCARDED? IF YES, STATE ITEM, WHEN DISCARDED, AND REASON FOR DISCARD.
☐ NO ☐ YES

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498197

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT – PAGE 5

OPNAV FORM 3750-8D (REV. 5-58)

OPNAV REPORT 3750-7

SECTION H - EMERGENCY EXIT FROM A/C AND SURVIVAL FACTORS

NAME OF INDIVIDUAL *(Last, first, middle)*

BROUGHTON, James A.

MODEL A/C

P2V-5FS

S	E	S-SUSPECTED, E-ESTABLISHED	REMARKS
		1. EJECTION - Attempted	
		2. - Accomplished	
		3. - Through canopy	
YES	NO	EJECTION DIFFICULTIES ENCOUNTERED	IF YES, EXPLAIN DIFFICULTIES
		4. - Prior to	
		5. - During	
		6. - Subsequent to	
		7. Give type and model of seat used	
		8. BAILOUT - Attempted	
		- Accomplished	

9. ALTITUDE AT TIME OF EXIT *(feet)*

ABOVE SEA LEVEL _____ ABOVE TOPOGRAPHY _____

10. ATTITUDE OR MANEUVER OF A/C AT EXIT OR IMPACT: Wings level, slight nose up

11. AIRSPEED: 90-110 knots

12. COLLISION OF A/C WITH: [X] GROUND [ ] WATER

13. CONTROLLED? [X] YES [ ] NO [ ] UNKNOWN

14. POWER: [X] ON [ ] OFF

15. WHEELS: [X] UP [ ] DOWN

16. FLAPS: [ ] FULL [X] UP [ ] PARTIAL

17. CANOPY POSITION AT EXIT OR IMPACT: [ ] OPEN [ ] CLOSED [ ] JETTISONED

18. SEA STATE:

19. AIR TEMP.: 88 °F

20. WATER TEMP.: °F

21. A/C FLOATED: SEC.

22. TIME IN WATER:

23. TIME IN RAFT:

BAIL OUT OR COLLISION WITH WATER OR GROUND

24. EXIT USED: None

25. IS THIS THE RECOMMENDED EXIT? IF NO STATE REASON FOR CHOICE. [ ] YES [ ] NO

26. DIFFICULTIES WITH THIS EXIT WERE: [ ] IN REACHING [ ] IN OPENING [ ] IN EXITING

27. STATE NATURE OF DIFFICULTY

28. BODY POSITION DURING EXIT

29. LIST OTHER FACTORS NOT INDICATED ABOVE WHICH AFFECTED EXIT FROM A/C

Fatal injuries on impact with ground.

SURVIVAL FACTORS: Check factors below which are appropriate for this accident. Prepare a detailed narrative account of the factors checked below and attach to this form. Identify each item discussed by item number (e.g., H30, H31, etc.)

COMMUNICATIONS:
- [ ] 30. Communicated position prior to mishap
- [ ] 31. Witnesses at scene
- [ ] 32. Electronic signal devices
- [ ] 33. Visual signal devices
- [ ] 34. Auditory signal devices
- [ ] 35. OTHER:

TRAVEL:
- [ ] 36. LAND
- [ ] 37. WATER

SHELTER:
- [ ] 38. Life raft
- [ ] 39. Parachute
- [ ] 40. A/C structure
- [ ] 41. Natural shelter
- [ ] 42. Man-made shelter
- [ ] 43. OTHER:

WATER SOURCE:
- [ ] 44. Desalter kit, seawater or solar still
- [ ] 45. Rain, dew, snow, ice, etc.
- [ ] 46. Processed beverages
- [ ] 47. Canteen, thermos, water breaker, etc.
- [ ] 48. Streams, ponds, wells, etc.
- [ ] 49. OTHER:

MAINTAINING BODY TEMPERATURE:
- [ ] 50. Items used as shelter
- [ ] 51. Items used as clothing
- [ ] 52. Fire
- [ ] 53. OTHER:

ENVIRONMENTAL HAZARDS:
- [ ] 54. Exposure to natural forces
- [ ] 55. Exposure to dangerous animals and plants
- [ ] 56. Unfriendly native population
- [ ] 57. OTHER:

MORALE:
- [ ] 58. Isolation
- [ ] 59. Psychological shock
- [ ] 60. Lack of motivation to survive
- [ ] 61. Boredom
- [ ] 62. Rationing, activities, and group coordination
- [ ] 63. OTHER:

FOOD SOURCE:
- [ ] 64. Prepared survival rations
- [ ] 65. Animals/plants
- [ ] 66. OTHER:

SURVIVAL TRAINING RECEIVED PRIOR TO MISHAP:
- [ ] 67.

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-576062

MEDICAL OFFICER'S REPORT OF A/[illegible] ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 6
OPNAV FORM 3750-6E (Rev. 5-58)

OPNAV REPORT 3750-7

SECTION I - PATHOLOGICAL FACTORS (Use A to denote ANTE MORTEM; P for P[illegible] MORTEM, when known and applicable.)

1. NAME OF INDIVIDUAL (Last, first, middle): BROUGHTON, James A.

MODEL A/C: P2V-5FS

2. AGE	3. HEIGHT	4. WEIGHT	5. LOCATION AND DIRECTION FACING AT TIME OF ACCIDENT	6. INJURY CODE
29	72 INCHES	190	Left Pilot Seat	A

7. UNCONSCIOUSNESS: [ ] SHORT DURATION LITTLE SIGNIFICANCE [ ] OTHER (give time)

8. INTERNAL INJURIES (Non-fatal cases)

HEAD INJURIES

9. CEREBRAL CONCUSSION: [ ] MINOR [ ] SERIOUS [ ] CRITICAL [X] FATAL

10. FACIAL INJURIES (b) (6)

11. INTRA-ORAL INJURIES

12. MINOR EYE INJURIES: [ ] RIGHT [ ] LEFT

13. MAJOR EYE INJURIES: [X] RIGHT [X] LEFT

14. TYPE OF FRACTURE

	SKULL		VERTEBRAE (Specify No.)					SHOULDER GIRDLE	RIBS	PELVIS	UPPER ARM		LOWER ARM		HAND		UPPER LEG		LOWER LEG		FOOT	
	CRAN.	FACIAL	CERV.	THOR.	LUMBAR	SACRAL	COCCYX				R	L	R	L	R	L	R	L	R	L	R	L
SIMPLE																						
COMPOUND																						
COMMINUTED		X	X	X					X	X							X					
DIS-LOCATION		JAW									SHOULDER		ELBOW		WRIST		HIP		KNEE		ANKLE	
															HAND						FOOT	

15. AMPUTATIONS/AVULSIONS (State Parts): (b) (6)

16. LIST PRE-EXISTING PHYSICAL DEFECTS PRESENT AT TIME OF POST CRASH EXAMINATION: (b) (6)

17. SOFT TISSUE INJURIES

		LACERATIONS			CONTUSION/SPRAIN/STRAIN			ABRASIONS		
		MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE
HEAD (m.o.g.)	VENTRAL									
	DORSAL									
NECK										
THORAX	VENTRAL									
	DORSAL									
ABDOMEN	VENTRAL									
	DORSAL									
EXTREMITIES	UPPER									
	LOWER									

18. [ ] DROWNED

19. [ ] ASPHYXIATED

20. SHOCK: [ ] MILD [ ] MODERATE [X] SEVERE

21. EXPOSURE: [ ] MILD [ ] MODERATE [X] SEVERE

22. [X] BURNS [ ] FROST BITE

	DEGREE									
	1ST	2ND	3RD	1ST	2ND	3RD	1ST	2ND	3RD
AREA			X			X			X
	HEAD (ventral)	HEAD (Dorsal)	TRUNK (ventral)	TRUNK (Dorsal)	ARMS	LEGS			
	X	X	X	X	X	X			

23. EXTENT OF CARBONIZATION: [ ] NONE [X] COMPLETE (almost)

ARE TISSUE SPECIMENS OBTAINABLE? [X] YES [ ] NO

NOTE: Attach a detailed narrative account of injuries, cause, structures causing injury, magnitudes of force, and include whether ANTE- OR POST-MORTEM if determined. It is necessary to give as clear a picture of injury cause and sequence as possible.

24. ADMITTED TO SICK LIST? IF YES, GIVE DIAGNOSIS: [X] YES [ ] NO for record purpose only

25. DIAGNOSIS NO. (NAVMED P-1294)

26. ESTIMATED STAY ON SICK LIST: - DAYS

27. GROUNDED? IF YES GIVE REASON: [ ] YES [X] NO

28. ESTIMATED DURATION: DAYS

29. PRIMARY CAUSE OF DEATH (Use Basic Diagnostic Nomenclature, NAVMED P-1294): Injuries, multiple, extreme NO. 8651

30. SECONDARY CAUSE OF DEATH: Burn, NEC, 100%, 3° NO. 8403

31. AUTOPSY PERFORMED? [X] YES [ ] NO

32. PROTOCOL: [X] ATTACHED [ ] WILL BE FORWARDED

33. AUTOPSY CONDUCTED BY: [X] PATHOLOGIST [ ] FLIGHT SURGEON

IF FLIGHT SURGEON DOES AUTOPSY USE "AUTOPSY GUIDE FOR A/C ACCIDENT FATALITIES", AFIP, 1957.

34. SPECIMEN	TEST PERFORMED	RESULTS	SPECIMEN	TEST PERFORMED	RESULTS
BLOOD: 1			TISSUE: (CNS)		
2			- MUSCLE		
3			- VISCERA		
URINE			OTHER:		
G-I CONTENTS					

35. IF ULTRAVIOLET LIGHT OR OTHER SPECIALIZED INVESTIGATIVE PROCEDURES WERE USED AT THE MISHAP SITE OR AUTOPSY, LIST THEM IN THIS SPACE. FOR EACH ENTRY IN THIS SPACE A NARRATIVE ACCOUNT OF THEIR RESULTS AND INTERPRETATION WILL BE ATTACHED.

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498198

AUTOPSY: A-84-62

Name: BROUGHTON, James Albert
Race: Caucasian
Died: 7-23-62, 1044

Age:
Sex: Male
Autopsy: 7-25-62, 1000

CLINICAL SUMMARY: This officer was part of a crew of a Navy P2V patrol bomber, which crashed on 7-23-62. (See 1st para. of Autopsy 80-62 for details of this crash). The exact status of this officer in the crew has not been available to prosector.

EXTERNAL EXAMINATION:
(b) (6)
[redacted]

SUMMARY OF GROSS FINDINGS:
(b) (6)
[redacted]

GROSS PATHOLOGIC DIAGNOSES:

Injuries, Multiple, Extreme.
1. (b) (6)
2. [redacted]
3.

CAUSE OF DEATH: Injuries, multiple, extreme (Aircraft accident).

(b) (6)
[redacted]; LCDR MC USN

MEDICAL OFFICER'S REPORT OF ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 2
OPNAV FORM 3750-6A (Rev. 5-58)

OPNAV REPORT 3750-7

SECTION C - PHYSIOLOGICAL, HUMAN ENGINEERING, DESIGN, SOCIO-PSYCHOLOGICAL, AND TRAINING FACTORS WHICH CONTRIBUTED IN SOME DEGREE TO THIS A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT

NAME OF INDIVIDUAL (Last, first, middle)

ANDERSON, Ronald W.

MODEL A/C

P2V-5FS

Check E-Established, S-Suspected, or P-Present for each factor selected. Additional 8X10½ plain sheets will be used for the supporting account of items checked below. Identify each statement with the factor and section identification (e.g., C1, C2, etc.). Attach all sheets pertaining to these factors to this form upon completion.

E	S	P	✓ FACTORS
			PHYSIOLOGICAL:
			1. Physically incapacitated in flight
			2. "G" forces
			3. Environmental stress - External
			4. - Internal
			5. Dysbarism/explosive decompression
			6. Diet
			7. Fatigue
			8. Hypoxia
			9. Related illness
			10. Vertigo/Disorientation/Illusions
			11. Hyperventilation
			12. Drugs
			13. Physical state
			14. OTHER:
			HUMAN ENGINEERING AND DESIGN:
			15. Personal equipment
	X		16. Displays and/or controls
			17. Work arrangement
			18. Working environment
			19. Habit interference
			20. OTHER:
			SOCIO-PSYCHOLOGICAL: *(Emotional stress from non-duty sources)*
			21. Pregnancy
			22. Illness or death
			23. Arguments
			24. Elated/Depressed state
			25. Personal habits - Drinking
			26. - Sex
			27. - Gambling
			28. - Debts

E	S	P	✓ FACTORS
			SOCIO-PSYCHOLOGICAL: *(Emotional stress from duty sources)*
			29. Expeditings/Delays
			30. Weather
X			31. Mechanical Problems
			32. Social and working relationships
			33. Personal comfort
			34. Regulations
			35. Facilities
			36. Navigation
			37. Duty assignment
			38. Personality traits
			NON-STRESS FACTORS:
			39. Faulty attention
			40. Poor judgement
			41. Forgetfulness
			42. OTHER SOCIO-PSYCHOLOGICAL FACTORS
			TRAINING FACTORS:
			43. Physiological training
			44. Emergency Procedures training
			45. Survival and rescue training
			46. Refresher training
			47. Transition training
			48. OTHER:

SECTION D - AIR CREW DATA *(fill in where applicable)*

1. Flight time past 30 days	32.7
2. Flight time last 24 hours	2.1
3. Number of flights in last 24 hours	1
4. Time at controls this flight	2.1
5. Number of hours duty last 24 hours	3.5
6. Total flight time	519.9

7. Total time in model: **519.9**

8. Number of days grounded last month, give reason: **None**

9. Number of and dates of previous accidents: **None**

SECTION E - CONTRIBUTING FACTORS AND THEIR ANALYSES *(As condensed from Part I, Sect. D and Part VIII of the AAR)*

NOTE: Fill in this section only on that set of forms prepared for FIRST individual listed in Section A, i.e. 15(a). Attach additional sheets as necessary.

See Part VIII, AAR, "The Analysis."

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498194

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 3 OPNAV REPORT 3750-7

OPNAV FORM 3750-8B (5-58)

SECTION F - SAFETY, PERSONAL, AND SURVIVAL EQUIPMENT

Prepare a narrative account of damaged or failed items. Identify each item discussed (e.g., F1, F2, etc.)

NAME OF INDIVIDUAL *(Last, first, middle)*: ANDERSON, Ronald W.

MODEL A/C: P2V-5FS

GENERAL DESCRIPTION OF EQUIPMENT	AVAILABLE YES	AVAILABLE NO	SPECIFIC MODEL OR TYPE	UTILIZED YES	UTILIZED NO	FAILED YES	FAILED NO	DESCRIPTION OF DAMAGE TO EQUIPMENT
1. Shoulder harness		X						
2. Lap belt	X		NAF 1201-8B		X			Not found
3. Inertia reel		X			X			Not found
4. G-Suit		X			X			Not found
5. Pressure suit-full or partial		X						
6. Exposure suit		X						
7. Flight suit *(Other than above)*	X		Summer Flying	X		X		Burned
8. Helmet	X		APH-5					Not found
9. Goggles/Eyeshield	X							
10. Shoes	X		Field Shoes	X		X		Burned
11. Gloves	X		Standard Issue		X			Not found
12. Life vest	X		Mae West		X			Not found
13. Life raft (2)	X		MK VII					
14. OTHER:								
15. SIGNAL DEVICE - Flare *(Night)*	X		MK XIII		X			Not found
16. - Flare *(Day)*	X		MK XIII		X			Not found
17. - Dye marker	X		MK XIII		X			Not found
18. - Radio	X		AN/GRT-3		X			Not found
19. - Flashlight	X		Vest Light		X			Not found
20. - Mirror	X							
21. OTHER:								
22. SURVIVAL GEAR - Knife	X		Standard Issue		X			Burned
23. - First aid kit	X		PSK-11		X			Not found
24. - Shelter								
25. - Food								
26. OTHER:								
27. RESCUE - Vehicle								
28. - Sling, Net, Stretcher								
29. OTHER:								

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE

OXYGEN EQUIPMENT

1. MASK - MODEL OR TYPE: A-13A
2. MODIFICATIONS, IF ANY: None
3. REGULATOR - MODEL OR TYPE: 2872
4. MODIFICATIONS, IF ANY: None
5. PREFLIGHTED BY USER? ☐ YES ☒ NO
6. IF NO, WHY NOT: Not usual routine in P2V
7. LIST DISCREPANCIES NOTED BY PREFLIGHT CHECK:
8. OXYGEN SUPPLY: PRIOR TO FLIGHT ____ LITERS *(Liquid)* 1600 P.S.I. *(Gas)*; TIME OF ACCIDENT ____ LITERS *(Liquid)* 1600 P.S.I. *(Gas)*
9. WAS OXYGEN IN USE AT TIME OF ACCDT. ☐ YES ☒ NO
10. IF YES, WAS SELECTOR SETTING ☐ 100% ☐ NORMAL
11. WAS ALL OXYGEN EQUIPMENT NECESSARY FOR THIS FLIGHT AVAILABLE? IF NO, LIST ITEMS AND REASON WHY. ☐ YES ☐ NO
12. WAS OXYGEN MASK REMOVED AT ANY TIME IN FLIGHT? IF YES, GIVE DURATION AND REASON. ☐ NO ☐ YES

RELEASE DEVICES

13. TYPE CHUTE RELEASE DEVICE
14. TYPE HARNESS RELEASE DEVICE
15. WHEN WERE RELEASE DEVICES ACTIVATED?
16. WERE DIFFICULTIES ENCOUNTERED WITH RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
17. WERE DIFFICULTIES ENCOUNTERED AFTER ACTIVATING RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
18. WAS LIFE VEST INFLATED PRIOR TO ACTIVATING RELEASE DEVICES? IF YES, WHAT DIFFICULTIES DID THIS PRODUCE? ☐ YES ☐ NO

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-574364

(Continued on OPNAV FORM 3750-8C)

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, GROUND ACCIDENT - PAGE 4
OPNAV FORM 3750-8C (5-58)

OPNAV REPORT 3750-7

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE *(Continued)*

NAME OF INDIVIDUAL *(Last, first, middle)*: ANDERSON, Ronald W.

MODEL A/C: P2V-5FS

RESTRAINT HARNESS

19. INTEGRATED HARNESS SYSTEM, MODEL/TYPE

20. INTEGRATED? ☐ FULL ☐ PARTIAL

21. MODIFICATIONS, IF ANY STATE REASON

22. DID INTEGRATED HARNESS FIT PROPERLY? IF NO, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR
☐ NO ☐ YES

23. INTEGRATED HARNESS FITTING WAS CONDUCTED BY:
☐ WEARER ☐ FLIGHT SURGEON ☐ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

24. IF SHOULDER HARNESS WAS USED, WAS IT:
☐ LOCKED ☐ UNLOCKED ☐ TIGHT ☐ SLACK ☐ OTHER CONDITION

HELMET

25. TYPE HELMET: APH-5

26. LIST PRESCRIBED MODIFICATIONS: Nape strap

27. OTHER MODIFICATIONS AND REASON FOR THEM

28. DID HELMET FIT PROPERLY? IF NO, GIVE REASON
☒ YES ☐ NO

29. HELMET FITTING WAS CONDUCTED BY:
☒ WEARER ☐ FLIGHT SURGEON ☒ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

PARACHUTE

30. TYPE CHUTE: N3CR

31. LAST PACKING DATE: 7-12-62

32. MODEL/TYPE BAILOUT OXYGEN

33. AUTOMATIC RIPCORD, IF INSTALLED *(Model and type)*
☐ NONE

34. DID AUTOMATIC RIPCORD FAIL? IF YES, WHY?
☐ NO

35. WAS RIPCORD ACTIVATION
☐ MANUAL ☐ AUTOMATIC?

36. IF MANUALLY ACTIVATED STATE REASON AND ANY DIFFICULTIES ENCOUNTERED

37. DID CHUTE OPEN IMMEDIATELY? IF NO, GIVE REASON
☐ YES ☐ NO

38. ALTITUDE THAT CHUTE OPENED
FEET

39. OPENING SHOCK WAS:
☐ SLIGHT ☐ MODERATE ☐ SEVERE

40. BODY ATTITUDE AT OPENING

41. CONDITION OF CHUTE AFTER OPENING

42. CHUTE OSCILLATION PRESENT:
☐ NONE ☐ SLIGHT ☐ MODERATE ☐ SEVERE

43. IF OSCILLATION WAS PRESENT, HOW WAS IT STOPPED?

44. WEATHER CONDITIONS DURING DESCENT *(List in sequence)*

45. TOPOGRAPHY OF LANDING SITE

46. WAS BAILOUT OXYGEN CONNECTED?
☐ BEFORE EXIT ☐ AFTER EXIT ☐ NO ☐ N.A.

47. WAS BAILOUT OXYGEN USED? IF NOT, WHY
☐ YES ☐ NO

48. WHEN WAS IT ACTIVATED?
☐ BEFORE EXIT ☐ AFTER EXIT

49. GIVE DIFFICULTIES ENCOUNTERED WITH BAILOUT OXYGEN AND THEIR CAUSE, IF ANY

50. WAS CHUTE HARNESS
☐ TIGHT ☐ SNUG ☐ LOOSE

51. WAS A SITTING POSITION IN SLING OBTAINED DURING DESCENT? IF NOT, WHY?
☐ NO ☐ YES ☐ NOT ATTEMPTED

52. SEAT CUSHION IF PROVIDED *(Model/Type)*
☐ NONE

53. WAS PARARAFT LANYARD CONNECTED TO LIFE VEST D RING? IF NOT, WHY?
☐ NO ☐ YES

54. LIST TYPE OF PARACHUTE TRAINING COMPLETED BY THIS INDIVIDUAL
☐ NONE Lectures and demonstrations

55. IF ATTEMPT WAS MADE TO RELEASE PARARAFT DURING DESCENT, WAS RELEASE ACTIVATED SUCCESSFULLY?
☐ YES ☐ NO

56. IF NO, GIVE REASON

OTHER

57. IF G-SUIT, EXPOSURE SUIT, FULL OR PARTIAL PRESSURE SUIT WAS WORN, DID IT FIT PROPERLY? IF NOT, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR.
☐ YES ☐ NO

58. WAS G-SUIT EQUIPPED WITH A SPRING-LOADED DISCONNECT ADAPTER? IF NO, GIVE REASON
☐ YES ☐ NO

59. LIST ALL ITEMS OF NON-STANDARD CLOTHING OR SURVIVAL EQUIPMENT UTILIZED

60. WAS ANY ITEM OF EQUIPMENT LOST? IF YES STATE ITEM, WHEN LOST, AND REASON FOR LOSS.
☐ NO ☐ YES

61. WAS ANY ITEM OF EQUIPMENT DISCARDED? IF YES, STATE ITEM, WHEN DISCARDED, AND REASON FOR DISCARD.
☐ NO ☐ YES

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498197

MEDICAL OFFICER'S REPORT ON A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 5 OPNAV REPORT 3750-7

OPNAV FORM 3750-8D (REV. 5-58)

SECTION H - EMERGENCY EXIT FROM A/C AND SURVIVAL FACTORS

NAME OF INDIVIDUAL *(Last, first, middle)*: ANDERSON, Ronald W.

MODEL A/C: P2V-5FS

S	E	S-SUSPECTED, E-ESTABLISHED	REMARKS
		1. EJECTION - Attempted	
		2. - Accomplished	
		3. - Through canopy	
YES	NO	EJECTION DIFFICULTIES ENCOUNTERED	IF YES, EXPLAIN DIFFICULTIES
		4. - Prior to	
		5. - During	
		6. - Subsequent to	
		7. Give type and model of seat used	
		8. BAILOUT - Attempted	
		- Accomplished	

9. ALTITUDE AT TIME OF EXIT *(feet)*: ABOVE SEA LEVEL _____ ABOVE TOPOGRAPHY _____

10. ATTITUDE OR MANEUVER OF A/C AT EXIT OR IMPACT: Wings level, slight nose up

11. AIRSPEED: 90-110 knots

12. COLLISION OF A/C WITH: [X] GROUND [ ] WATER

13. CONTROLLED? [X] YES [ ] NO [ ] UNKNOWN

14. POWER: [X] ON [ ] OFF

15. WHEELS: [X] UP [ ] DOWN

16. FLAPS: [ ] FULL [X] UP [ ] PARTIAL

17. CANOPY POSITION AT EXIT OR IMPACT: [ ] OPEN [ ] CLOSED [ ] JETTISONED

18. SEA STATE:

19. AIR TEMP.: 88 °F

20. WATER TEMP.: °F

21. A/C FLOATED: SEC.

22. TIME IN WATER:

23. TIME IN RAFT:

BAIL OUT OR COLLISION WITH WATER OR GROUND

24. EXIT USED: None

25. IS THIS THE RECOMMENDED EXIT? IF NO STATE REASON FOR CHOICE. [ ] YES [ ] NO

26. DIFFICULTIES WITH THIS EXIT WERE: [ ] IN REACHING [ ] IN OPENING [ ] IN EXITING

27. STATE NATURE OF DIFFICULTY

28. BODY POSITION DURING EXIT

29. LIST OTHER FACTORS NOT INDICATED ABOVE WHICH AFFECTED EXIT FROM A/C

Fatal injuries on impact with ground.

SURVIVAL FACTORS: Check factors below which are appropriate for this accident. Prepare a detailed narrative account of the factors checked below and attach to this form. Identify each item discussed by item number (e.g., H30, H31, etc.)

COMMUNICATIONS:		MAINTAINING BODY TEMPERATURE:	
	30. Communicated position prior to mishap		50. Items used as shelter
	31. Witnesses at scene		51. Items used as clothing
	32. Electronic signal devices		52. Fire
	33. Visual signal devices		53. OTHER:
	34. Auditory signal devices	ENVIRONMENTAL HAZARDS:	
	35. OTHER:		54. Exposure to natural forces
TRAVEL:			55. Exposure to dangerous animals and plants
	36. LAND		56. Unfriendly native population
	37. WATER		57. OTHER:
SHELTER:		MORALE:	
	38. Life raft		58. Isolation
	39. Parachute		59. Psychological shock
	40. A/C structure		60. Lack of motivation to survive
	41. Natural shelter		61. Boredom
	42. Man-made shelter		62. Rationing, activities, and group coordination
	43. OTHER:		63. OTHER:
WATER SOURCE:		FOOD SOURCE:	
	44. Desalter kit, seawater or solar still		64. Prepared survival rations
	45. Rain, dew, snow, ice, etc.		65. Animals/plants
	46. Processed beverages		66. OTHER:
	47. Canteen, thermos, water breaker, etc.	SURVIVAL TRAINING RECEIVED PRIOR TO MISHAP:	
	48. Streams, ponds, wells, etc.		67.
	49. OTHER:		

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-870065

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 6

OPNAV FORM 3750-8E (Rev. 5-58)

OPNAV REPORT 3750-7

SECTION I - PATHOLOGICAL FACTORS (Use A to denote ANTE MORTEM; P for POST MORTEM, when known and applicable.)

1. NAME OF INDIVIDUAL (Last, first, middle): ANDERSON, Ronald W.

2. AGE: 20 | 3. HEIGHT: 69 1/2 INCHES | 4. WEIGHT: 155 | 5. LOCATION AND DIRECTION FACING AT TIME OF ACCIDENT: Plane Captain seat facing forward | MODEL A/C: P2V-5FS

7. UNCONSCIOUSNESS: [ ] SHORT DURATION LITTLE SIGNIFICANCE [ ] OTHER (give time) | 8. INTERNAL INJURIES (Non-fatal cases) | 6. INJURY CODE: A

HEAD INJURIES

9. CEREBRAL CONCUSSION: [ ] MINOR [ ] SERIOUS [ ] CRITICAL [X] FATAL

10. FACIAL INJURIES (n.e.c.): Charring

11. INTRA-ORAL INJURIES

12. MINOR EYE INJURIES: [ ] RIGHT [ ] LEFT

13. MAJOR EYE INJURIES: [X] RIGHT [X] LEFT

14. TYPE OF FRACTURE

	SKULL		VERTEBRAE (Specify No.)					SHOULDER GIRDLE	RIBS	PELVIS	UPPER ARM		LOWER ARM		HAND		UPPER LEG		LOWER LEG		FOOT	
	CRAN.	FACIAL	CERV.	THOR.	LUMBAR	SACRAL	COCCYX				R	L	R	L	R	L	R	L	R	L	R	L
SIMPLE																						
COMPOUND		X																				
COMMINUTED	X																					
DIS-LOCATION		JAW									X	X										

SHOULDER	ELBOW	WRIST	HIP	KNEE	ANKLE
		HAND			FOOT
X X			X X		

15. AMPUTATIONS/AVULSIONS (State Parts)

16. LIST PRE-EXISTING PHYSICAL DEFECTS PRESENT AT TIME OF POST CRASH EXAMINATION: (b) (6) None

17. SOFT TISSUE INJURIES

		LACERATIONS			CONTUSION/SPRAIN/STRAIN			ABRASIONS		
		MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE
HEAD (n.e.c.)	VENTRAL									
	DORSAL									
NECK										
THORAX	VENTRAL									
	DORSAL									
ABDOMEN	VENTRAL									
	DORSAL									
EXTREMITIES	UPPER									
	LOWER									

18. [ ] DROWNED

19. [ ] ASPHYXIATED

20. SHOCK: [ ] MILD [ ] MODERATE [X] SEVERE

21. EXPOSURE: [ ] MILD [ ] MODERATE [X] SEVERE

22. [X] BURNS [ ] FROST BITE

DEGREE	1ST	2ND	3RD	1ST	2ND	3RD	1ST	2ND	3RD
			X			X			X

AREA	HEAD (ventral)	Dorsal)	TRUNK (ventral	Dorsal)	ARMS	LEGS
	X	X	X	X	X	X

23. EXTENT OF CARBONIZATION: [ ] NONE [X] COMPLETE (almost)

ARE TISSUE SPECIMENS OBTAINABLE? [X] YES [ ] NO

NOTE: Attach a detailed narrative account of injuries, cause, structures causing injury, magnitudes of force, and include whether ANTE- OR POST-MORTEM if determined. It is necessary to give as clear a picture of injury cause and sequence as possible.

24. ADMITTED TO SICK LIST? IF YES, GIVE DIAGNOSIS: [X] YES [ ] NO for record purpose only

25. DIAGNOSIS NO. (NAVMED P-1294)

26. ESTIMATED STAY ON SICK LIST: DAYS

27. GROUNDED? IF YES GIVE REASON: [ ] YES [X] NO

28. ESTIMATED DURATION: DAYS

29. PRIMARY CAUSE OF DEATH (Use Basic Diagnostic Nomenclature, NAVMED P-1294): Injuries, Multiple, Extreme NO. 8651

30. SECONDARY CAUSE OF DEATH: Burn, NEC, 100%, 3° NO. 8403

31. AUTOPSY PERFORMED? [X] YES [ ] NO

32. PROTOCOL: [X] ATTACHED [ ] WILL BE FORWARDED

33. AUTOPSY CONDUCTED BY: [X] PATHOLOGIST [ ] FLIGHT SURGEON

IF FLIGHT SURGEON DOES AUTOPSY USE "AUTOPSY GUIDE FOR A/C ACCIDENT FATALITIES", AFIP, 1957.

34.

SPECIMEN	TEST PERFORMED	RESULTS
BLOOD: 1		
2		
3		
URINE		
G-I CONTENTS		

SPECIMEN	TEST PERFORMED	RESULTS
TISSUE: (CNS)		
• MUSCLE		
• VISCERA		
OTHER:		

35. IF ULTRAVIOLET LIGHT OR OTHER SPECIALIZED INVESTIGATIVE PROCEDURES WERE USED AT THE MISHAP SITE OR AUTOPSY, LIST THEM IN THIS SPACE. FOR EACH ENTRY IN THIS SPACE A NARRATIVE ACCOUNT OF THEIR RESULTS AND INTERPRETATION WILL BE ATTACHED.

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498195

9-56572

AUTOPSY: A-85-62

Name: ANDERSON, Ronald Williams
Race: Caucasian
Died: 7-23-62, 1044

Age:
Sex: Male
Autopsy: 7-25-62, 1100

PROLOGUE: The subject is one of the occupants of a P2V aircraft accident occurring on 23 July 1962 in the vicinity of Brunswick, Georgia. Identification is made on the basis of dental examination.

GROSS DESCRIPTION OF THE BODY: [redacted]
(b) (6)

HEAD: [redacted]
(b) (6)

[redacted]

COMMENT: This portion of a human body exhibits (b) (6) [redacted]
(b) (6) [redacted] In addition it is severely burned. Further pathologic examination is not warranted.

PATHOLOGIC DIAGNOSES: 1. (b) (6) [redacted]
2.

PRESUMPTIVE CAUSE OF DEATH: No single feature determined.

(b) (6) [redacted], LCDR MC USN.

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 2

OPNAV FORM 3750-8A (Rev. 5-58)

OPNAV REPORT 3750-7

SECTION C - PHYSIOLOGICAL, HUMAN ENGINEERING, DESIGN, SOCIO-PSYCHOLOGICAL, AND TRAINING FACTORS WHICH CONTRIBUTED IN SOME DEGREE TO THIS A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT

NAME OF INDIVIDUAL (Last, first, middle)

CAWTHON, James V.

MODEL A/C

P2V-5FS

Check E-Established, S-Suspected, or P-Present for each factor selected. Additional 8X10½ plain sheets will be used for the supporting account of items checked below. Identify each statement with the factor and section identification (e.g., C1, C2, etc.). Attach all sheets pertaining to these factors to this form upon completion.

E	S	P	✓ FACTORS
			PHYSIOLOGICAL:
			1. Physically incapacitated in flight
			2. "G" forces
			3. Environmental stress - External
			4. - Internal
			5. Dysbarism/explosive decompression
			6. Diet
			7. Fatigue
			8. Hypoxia
			9. Related illness
			10. Vertigo/Disorientation/Illusions
			11. Hyperventilation
			12. Drugs
			13. Physical state
			14. OTHER:
			HUMAN ENGINEERING AND DESIGN:
			15. Personal equipment
			16. Displays and/or controls
			17. Work arrangement
			18. Working environment
			19. Habit interference
			20. OTHER:
			SOCIO-PSYCHOLOGICAL: *(Emotional stress from non-duty sources)*
			21. Pregnancy
			22. Illness or death
			23. Arguments
			24. Elated/Depressed state
			25. Personal habits - Drinking
			26. - Sex
			27. - Gambling
			28. - Debts

E	S	P	✓ FACTORS
			SOCIO-PSYCHOLOGICAL: *(Emotional stress from duty sources)*
			29. Expeditings/Delays
			30. Weather
			31. Mechanical Problems
			32. Social and working relationships
			33. Personal comfort
			34. Regulations
			35. Facilities
			36. Navigation
			37. Duty assignment
			38. Personality traits
			NON-STRESS FACTORS:
			39. Faulty attention
			40. Poor judgement
			41. Forgetfulness
			42. OTHER SOCIO-PSYCHOLOGICAL FACTORS
			TRAINING FACTORS:
			43. Physiological training
			44. Emergency Procedures training
			45. Survival and rescue training
			46. Refresher training
			47. Transition training
			48. OTHER:

SECTION D - AIR CREW DATA *(fill in where applicable)*

1. Flight time past 30 days	4.9	7. Total time in model	334.8
2. Flight time last 24 hours	2.1	8. Number of days grounded last month, give reason	None
3. Number of flights in last 24 hours	1	9. Number of and dates of previous accidents	None
4. Time at controls this flight	2.1		
5. Number of hours duty last 24 hours	3.5		
6. Total flight time	334.8		

SECTION E - CONTRIBUTING FACTORS AND THEIR ANALYSES *(As condensed from Part I, Sect. D and Part VIII of the AAR)*

NOTE: Fill in this section only on that set of forms prepared for FIRST individual listed in Section A, i.e. 15(a). Attach additional sheets as necessary.

See Part VIII, AAR, "The Analysis."

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498194

SECTION F - SAFETY, PERSONAL, AND SURVIVAL EQUIPMENT

Prepare a narrative account of damaged or failed items. Identify each item discussed (e.g., F1, F2, etc.)

NAME OF INDIVIDUAL *(Last, first, middle)*: **CAWTHON, James V.**

MODEL A/C: **P2V-5FS**

GENERAL DESCRIPTION OF EQUIPMENT	AVAILABLE YES	AVAILABLE NO	SPECIFIC MODEL OR TYPE	UTILIZED YES	UTILIZED NO	FAILED YES	FAILED NO	DESCRIPTION OF DAMAGE TO EQUIPMENT
1. Shoulder harness		X						
2. Lap belt	X		NAF 1201 8B	X		X		Not found
3. Inertia reel		X						
4. G-Suit		X						
5. Pressure suit-full or partial		X						
6. Exposure suit		X						
7. Flight suit *(Other than above)*	X		Summer Flying	X		X		Burned
8. Helmet	X		APH-5	X		X		Not found
9. Goggles/Eyeshield	X							
10. Shoes	X		Field Shoes	X		X		Burned
11. Gloves	X		Standard Issue		X			Not found
12. Life vest	X		Mae West		X			Not found
13. Life raft (2)	X		MK VII		X			Not found
14. OTHER:								
15. SIGNAL DEVICE - Flare *(Night)*	X		MK XIII		X			Not found
16. - Flare *(Day)*	X		MK XIII		X			Not found
17. - Dye marker	X		MK XIII		X			Not found
18. - Radio	X		AN/GRT-3		X			Not found
19. - Flashlight	X		Vest Light		X			Not found
20. - Mirror								
21. OTHER:								
22. SURVIVAL GEAR - Knife	X		Standard Issue		X			Not found
23. - First aid kit	X		PSK 11		X			Not found
24. - Shelter								
25. - Food								
26. OTHER:								
27. RESCUE - Vehicle								
28. - Sling, Net, Stretcher								
29. OTHER:								

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE

OXYGEN EQUIPMENT

1. MASK - MODEL OR TYPE: **A-13A**
2. MODIFICATIONS, IF ANY: **None**
3. REGULATOR - MODEL OR TYPE: **2872**
4. MODIFICATIONS, IF ANY: **None**
5. PREFLIGHTED BY USER? ☐ YES ☒ NO
6. IF NO, WHY NOT: **Not usual routine in P2V**
7. LIST DISCREPANCIES NOTED BY PREFLIGHT CHECK:
8. OXYGEN SUPPLY: PRIOR TO FLIGHT ____ LITERS *(Liquid)* **1600** P.S.I. *(Gas)*; TIME OF ACCIDENT ____ LITERS *(Liquid)* **1600** P.S.I. *(Gas)*
9. WAS OXYGEN IN USE AT TIME OF ACCDT. ☐ YES ☒ NO
10. IF YES, WAS SELECTOR SETTING ☐ 100% ☐ NORMAL
11. WAS ALL OXYGEN EQUIPMENT NECESSARY FOR THIS FLIGHT AVAILABLE? IF NO, LIST ITEMS AND REASON WHY. ☐ YES ☐ NO
12. WAS OXYGEN MASK REMOVED AT ANY TIME IN FLIGHT? IF YES, GIVE DURATION AND REASON. ☐ NO ☐ YES

RELEASE DEVICES

13. TYPE CHUTE RELEASE DEVICE:
14. TYPE HARNESS RELEASE DEVICE:
15. WHEN WERE RELEASE DEVICES ACTIVATED?
16. WERE DIFFICULTIES ENCOUNTERED WITH RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
17. WERE DIFFICULTIES ENCOUNTERED AFTER ACTIVATING RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
18. WAS LIFE VEST INFLATED PRIOR TO ACTIVATING RELEASE DEVICES? IF YES, WHAT DIFFICULTIES DID THIS PRODUCE? ☐ YES ☐ NO

(Continued on OPNAV FORM 3750-8C)

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-543284

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, GROUND ACCIDENT - PAGE 4
OPNAV FORM 3750-8C (5-58)

OPNAV REPORT 3750-7

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE (Continued)

NAME OF INDIVIDUAL (Last, first, middle): CAWTHON, James V,

MODEL A/C: P2V-5FS

RESTRAINT HARNESS

19. INTEGRATED HARNESS SYSTEM, MODEL/TYPE

20. INTEGRATED? ☐ FULL ☐ PARTIAL

21. MODIFICATIONS, IF ANY STATE REASON

22. DID INTEGRATED HARNESS FIT PROPERLY? IF NO, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR
☐ NO ☐ YES

23. INTEGRATED HARNESS FITTING WAS CONDUCTED BY:
☐ WEARER ☐ FLIGHT SURGEON ☐ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

24. IF SHOULDER HARNESS WAS USED, WAS IT:
☐ LOCKED ☐ UNLOCKED ☐ TIGHT ☐ SLACK ☐ OTHER CONDITION

HELMET

25. TYPE HELMET: APH-5

26. LIST PRESCRIBED MODIFICATIONS: Nape strap

27. OTHER MODIFICATIONS AND REASON FOR THEM

28. DID HELMET FIT PROPERLY? IF NO, GIVE REASON
☒ YES ☐ NO

29. HELMET FITTING WAS CONDUCTED BY:
☒ WEARER ☐ FLIGHT SURGEON ☒ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

PARACHUTE

30. TYPE CHUTE: N3CR

31. LAST PACKING DATE: 7-12-62

32. MODEL/TYPE BAILOUT OXYGEN

33. AUTOMATIC RIPCORD, IF INSTALLED (Model and type)
☐ NONE

34. DID AUTOMATIC RIPCORD FAIL? IF YES, WHY?
☐ NO

35. WAS RIPCORD ACTIVATION
☐ MANUAL ☐ AUTOMATIC?

36. IF MANUALLY ACTIVATED STATE REASON AND ANY DIFFICULTIES ENCOUNTERED

37. DID CHUTE OPEN IMMEDIATELY? IF NO, GIVE REASON
☐ YES ☐ NO

38. ALTITUDE THAT CHUTE OPENED
FEET

39. OPENING SHOCK WAS:
☐ SLIGHT ☐ MODERATE ☐ SEVERE

40. BODY ATTITUDE AT OPENING

41. CONDITION OF CHUTE AFTER OPENING

42. CHUTE OSCILLATION PRESENT:
☐ NONE ☐ SLIGHT ☐ MODERATE ☐ SEVERE

43. IF OSCILLATION WAS PRESENT, HOW WAS IT STOPPED?

44. WEATHER CONDITIONS DURING DESCENT (List in sequence)

45. TOPOGRAPHY OF LANDING SITE

46. WAS BAILOUT OXYGEN CONNECTED?
☐ BEFORE EXIT ☐ AFTER EXIT ☐ NO ☐ N.A.

47. WAS BAILOUT OXYGEN USED? IF NOT, WHY
☐ YES ☐ NO

48. WHEN WAS IT ACTIVATED?
☐ BEFORE EXIT ☐ AFTER EXIT

49. GIVE DIFFICULTIES ENCOUNTERED WITH BAILOUT OXYGEN AND THEIR CAUSE, IF ANY

50. WAS CHUTE HARNESS
☐ TIGHT ☐ SNUG ☐ LOOSE

51. WAS A SITTING POSITION IN SLING OBTAINED DURING DESCENT? IF NOT, WHY?
☐ NO ☐ YES ☐ NOT ATTEMPTED

52. SEAT CUSHION IF PROVIDED (Model/Type)
☐ NONE

53. WAS PARARAFT LANYARD CONNECTED TO LIFE VEST D RING? IF NOT, WHY?
☐ NO ☐ YES

54. LIST TYPE OF PARACHUTE TRAINING COMPLETED BY THIS INDIVIDUAL
☐ NONE Lectures and demonstrations

55. IF ATTEMPT WAS MADE TO RELEASE PARARAFT DURING DESCENT, WAS RELEASE ACTIVATED SUCCESSFULLY?
☐ YES ☐ NO

56. IF NO, GIVE REASON

OTHER

57. IF G-SUIT, EXPOSURE SUIT, FULL OR PARTIAL PRESSURE SUIT WAS WORN, DID IT FIT PROPERLY? IF NOT, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR.
☐ YES ☐ NO

58. WAS G-SUIT EQUIPPED WITH A SPRING-LOADED DISCONNECT ADAPTER? IF NO, GIVE REASON
☐ YES ☐ NO

59. LIST ALL ITEMS OF NON-STANDARD CLOTHING OR SURVIVAL EQUIPMENT UTILIZED

60. WAS ANY ITEM OF EQUIPMENT LOST? IF YES STATE ITEM, WHEN LOST, AND REASON FOR LOSS.
☐ NO ☐ YES

61. WAS ANY ITEM OF EQUIPMENT DISCARDED? IF YES, STATE ITEM, WHEN DISCARDED, AND REASON FOR DISCARD.
☐ NO ☐ YES

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498197

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 5 OPNAV REPORT 3750-7
OPNAV FORM 3750-8D (REV. 5-58)

SECTION H - EMERGENCY EXIT FROM A/C AND SURVIVAL FACTORS

NAME OF INDIVIDUAL *(Last, first, middle)*	MODEL A/C
CAWTHON, James V.	P2V-5FS

S	E	S-SUSPECTED, E-ESTABLISHED	REMARKS
		1. EJECTION - Attempted	
		2. - Accomplished	
		3. - Through canopy	
YES	NO	EJECTION DIFFICULTIES ENCOUNTERED	IF YES, EXPLAIN DIFFICULTIES
		4. - Prior to	
		5. - During	
		6. - Subsequent to	
		7. Give type and model of seat used	
		8. BAILOUT - Attempted	
		- Accomplished	

9. ALTITUDE AT TIME OF EXIT *(feet)*	10. ATTITUDE OR MANEUVER OF A/C AT EXIT OR IMPACT	11. AIRSPEED
ABOVE SEA LEVEL _____ ABOVE TOPOGRAPHY _____	Wings level, slight nose up	90-110 knots

12. COLLISION OF A/C WITH	13. CONTROLLED?	14. POWER	15. WHEELS	16. FLAPS
[X] GROUND [ ] WATER	[X] YES [ ] NO [ ] UNKNOWN	[X] ON [ ] OFF	[X] UP [ ] DOWN	[ ] FULL [X] UP [ ] PARTIAL

17. CANOPY POSITION AT EXIT OR IMPACT	18. SEA STATE	19. AIR TEMP.	20. WATER TEMP.	21. A/C FLOATED	22. TIME IN WATER	23. TIME IN RAFT
[ ] OPEN [ ] CLOSED [ ] JETTISONED		88 °F	°F	SEC.		

BAIL OUT OR COLLISION WITH WATER OR GROUND

24. EXIT USED: None

25. IS THIS THE RECOMMENDED EXIT? IF NO STATE REASON FOR CHOICE. [ ] YES [ ] NO

26. DIFFICULTIES WITH THIS EXIT WERE [ ] IN REACHING [ ] IN OPENING [ ] IN EXITING

27. STATE NATURE OF DIFFICULTY

28. BODY POSITION DURING EXIT

29. LIST OTHER FACTORS NOT INDICATED ABOVE WHICH AFFECTED EXIT FROM A/C

Fatal injuries on impact with ground.

SURVIVAL FACTORS: Check factors below which are appropriate for this accident. Prepare a detailed narrative account of the factors checked below and attach to this form. Identify each item discussed by item number (e.g., H30, H31, etc.)

COMMUNICATIONS:		MAINTAINING BODY TEMPERATURE:	
	30. Communicated position prior to mishap		50. Items used as shelter
	31. Witnesses at scene		51. Items used as clothing
	32. Electronic signal devices		52. Fire
	33. Visual signal devices		53. OTHER:
	34. Auditory signal devices	ENVIRONMENTAL HAZARDS:	
	35. OTHER:		54. Exposure to natural forces
TRAVEL:			55. Exposure to dangerous animals and plants
	36. LAND		56. Unfriendly native population
	37. WATER		57. OTHER:
SHELTER:		MORALE:	
	38. Life raft		58. Isolation
	39. Parachute		59. Psychological shock
	40. A/C structure		60. Lack of motivation to survive
	41. Natural shelter		61. Boredom
	42. Man-made shelter		62. Rationing, activities, and group coordination
	43. OTHER:		63. OTHER:
WATER SOURCE:		FOOD SOURCE:	
	44. Desalter kit, seawater or solar still		64. Prepared survival rations
	45. Rain, dew, snow, ice, etc.		65. Animals/plants
	46. Processed beverages		66. OTHER:
	47. Canteen, thermos, water breaker, etc.	SURVIVAL TRAINING RECEIVED PRIOR TO MISHAP:	
	48. Streams, ponds, wells, etc.		67.
	49. OTHER:		

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-[illegible]

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 6

OPNAV FORM 3750-3E (Rev. 5-58)

OPNAV REPORT 3750-7

SECTION I - PATHOLOGICAL FACTORS (Use A to denote ANTE MORTEM; P for POST MORTEM, when known and applicable.)

1. NAME OF INDIVIDUAL (Last, first, middle)				MODEL A/C
CAWTHON, James V.				P2V-5FS
2. AGE	3. HEIGHT	4. WEIGHT	5. LOCATION AND DIRECTION FACING AT TIME OF ACCIDENT	6. INJURY CODE
31	72 INCHES	165	Radio compartment	A

7. UNCONSCIOUSNESS: [ ] SHORT DURATION LITTLE SIGNIFICANCE [ ] OTHER (give time)

8. INTERNAL INJURIES (Non-fatal cases)

HEAD INJURIES

9. CEREBRAL CONCUSSION: [ ] MINOR [ ] SERIOUS [X] CRITICAL [ ] FATAL

10. FACIAL INJURIES (n.e.c.): Charring

11. INTRA-ORAL INJURIES

12. MINOR EYE INJURIES: [ ] RIGHT [ ] LEFT

13. MAJOR EYE INJURIES: [X] RIGHT [X] LEFT

14. TYPE OF FRACTURE

	SKULL		VERTEBRAE (Specify No.)					SHOULDER GIRDLE	RIBS	PELVIS	UPPER ARM		LOWER ARM		HAND		UPPER LEG		LOWER LEG		FOOT	
	CRAN.	FACIAL	CERV.	THOR.	LUMBAR	SACRAL	COCCYX				R	L	R	L	R	L	R	L	R	L	R	L
SIMPLE																						
COMPOUND													X									
COMMINUTED																						
DIS-LOCATION		JAW									SHOULDER		ELBOW		WRIST		HIP		KNEE		ANKLE	
															HAND						FOOT	

15. AMPUTATIONS/AVULSIONS (State Parts)

(b) (6)

16. LIST PRE-EXISTING PHYSICAL DEFECTS PRESENT AT TIME OF POST CRASH EXAMINATION

(b) (6)

17. SOFT TISSUE INJURIES

		LACERATIONS			CONTUSION/SPRAIN/STRAIN			ABRASIONS		
		MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE
HEAD (n.e.c.)	VENTRAL									
	DORSAL									
NECK										
THORAX	VENTRAL									
	DORSAL									
ABDOMEN	VENTRAL									
	DORSAL									
EXTREMITIES	UPPER									
	LOWER									

18. [ ] DROWNED

19. [ ] ASPHYXIATED

20. SHOCK: [ ] MILD [ ] MODERATE [X] SEVERE

21. EXPOSURE: [ ] MILD [ ] MODERATE [X] SEVERE

22. [X] BURNS [ ] FROST BITE

DEGREE	1ST	2ND	3RD	1ST	2ND	3RD	1ST	2ND	3RD
			X			X			X

AREA	HEAD (ventral)	Dorsal)	TRUNK (ventral	Dorsal)	ARMS	LEGS
	X	X	X	X	X	X

23. EXTENT OF CARBONIZATION: [ ] NONE [X] COMPLETE (almost)

ARE TISSUE SPECIMENS OBTAINABLE? [X] YES [ ] NO

NOTE: Attach a detailed narrative account of injuries, cause, structures causing injury, magnitudes of force, and include whether ANTE- OR POST-MORTEM if determined. It is necessary to give as clear a picture of injury cause and sequence as possible.

24. ADMITTED TO SICK LIST? IF YES, GIVE DIAGNOSIS: [X] YES [ ] NO for record purpose only

25. DIAGNOSIS NO. (NAVMED P-1294)

26. ESTIMATED STAY ON SICK LIST: DAYS

27. GROUNDED? IF YES GIVE REASON: [ ] YES [X] NO

28. ESTIMATED DURATION: DAYS

29. PRIMARY CAUSE OF DEATH (Use Basic Diagnostic Nomenclature, NAVMED P-1294): Undetermined (See autopsy report)

30. SECONDARY CAUSE OF DEATH: Burn, NEC, 100%, 3° NO. 8403

31. AUTOPSY PERFORMED? [X] YES [ ] NO

32. PROTOCOL: [X] ATTACHED [ ] WILL BE FORWARDED

33. AUTOPSY CONDUCTED BY: [X] PATHOLOGIST [ ] FLIGHT SURGEON

IF FLIGHT SURGEON DOES AUTOPSY USE "AUTOPSY GUIDE FOR A/C ACCIDENT FATALITIES", AFIP, 1957.

34. SPECIMEN	TEST PERFORMED	RESULTS	SPECIMEN	TEST PERFORMED	RESULTS
BLOOD: 1			TISSUE: (CNS)		
2			- MUSCLE		
3			- VISCERA		
URINE			OTHER:		
G.I CONTENTS					

35. IF ULTRAVIOLET LIGHT OR OTHER SPECIALIZED INVESTIGATIVE PROCEDURES WERE USED AT THE MISHAP SITE OR AUTOPSY, LIST THEM IN THIS SPACE. FOR EACH ENTRY IN THIS SPACE A NARRATIVE ACCOUNT OF THEIR RESULTS AND INTERPRETATION WILL BE ATTACHED.

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498198

AUTOPSY: A-82-62

Name: CAWTHON, James Virlyn
Race: Caucasian
Died: 7-23-62, 1044

Age: 29
Sex: Male
Autopsy: 7-24-62, 1500

PROLOGUE: This body is one of several removed from a P2V aircraft accident occurring in the neighborhood of Brunswick, Georgia on 23 July 1962. Identification is established by means of dental examination.

GROSS DESCRIPTION OF THE BODY: [redacted]

(b) (6)

INCISIONS: (b) (6) [redacted]

HEAD: (b) (6) [redacted]

CHEST: [redacted]

(b) (6)

(Cont'd):

AUTOPSY: A-82-62 Name: CAWTHON, James Virlyn

(b) (6) [redacted]

ABDOMEN: [redacted]

(b) (6) [redacted]

SPLEEN: (b) (6) [redacted]

PANCREAS: (b) (6) [redacted]

KIDNEYS: (b) (6) [redacted]

GASTROINTESTINAL TRACT: (b) (6) [redacted]

COMMENT: Separation of the pathologic observations into traumatic ante-mortem and post-mortem injuries or pre-or post-thermal injuries is not absolutely possible.

(b) (6) [redacted]

PATHOLOGIC DIAGNOSES:

1. (b) (6) [redacted]
2. [redacted]
3. [redacted]
4. [redacted]
5. [redacted]

PRESUMPTIVE CAUSE OF DEATH: No single feature determined.

(b) (6) [redacted], LCDR MC USN

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT—Page 2

OPNAV FORM 3750-8A (REV. 5-58) OPNAV REPORT 3750-7

SECTION C—PHYSIOLOGICAL, HUMAN ENGINEERING, DESIGN, SOCIO-PSYCHOLOGICAL, AND TRAINING FACTORS WHICH CONTRIBUTED IN SOME DEGREE TO THIS A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT

NAME OF INDIVIDUAL (Last, first, middle): **MOSELER, Kenneth J.**

MODEL A/C: **P2V-5FS**

Check E-Established, S-Suspected, or P-Present for each factor selected. Additional 8X10½ plain sheets will be used for the supporting account of items checked below. Identify each statement with the factor and section identification (e.g., C1, C2, etc.). Attach all sheets pertaining to these factors to this form upon completion.

E	S	P	✓ FACTORS
			PHYSIOLOGICAL:
			1. Physically incapacitated in flight
			2. "G" forces
			3. Environmental stress - External
			4. - Internal
			5. Dysbarism/explosive decompression
			6. Diet
			7. Fatigue
			8. Hypoxia
			9. Related illness
			10. Vertigo/Disorientation/Illusions
			11. Hyperventilation
			12. Drugs
			13. Physical state
			14. OTHER:
			HUMAN ENGINEERING AND DESIGN:
			15. Personal equipment
			16. Displays and/or controls
			17. Work arrangement
			18. Working environment
			19. Habit interference
			20. OTHER:
			SOCIO-PSYCHOLOGICAL: *(Emotional stress from non-duty sources)*
			21. Pregnancy
			22. Illness or death
			23. Arguments
			24. Elated/Depressed state
			25. Personal habits - Drinking
			26. - Sex
			27. - Gambling
			28. - Debts

E	S	P	✓ FACTORS
			SOCIO-PSYCHOLOGICAL: *(Emotional stress from duty sources)*
			29. Expeditings/Delays
			30. Weather
			31. Mechanical Problems
			32. Social and working relationships
			33. Personal comfort
			34. Regulations
			35. Facilities
			36. Navigation
			37. Duty assignment
			38. Personality traits
			NON-STRESS FACTORS:
			39. Faulty attention
			40. Poor judgement
			41. Forgetfulness
			42. OTHER SOCIO-PSYCHOLOGICAL FACTORS
			TRAINING FACTORS:
			43. Physiological training
			44. Emergency Procedures training
			45. Survival and rescue training
			46. Refresher training
			47. Transition training
			48. OTHER:

SECTION D — AIR CREW DATA *(fill in where applicable)*

1. Flight time past 30 days	33.0
2. Flight time last 24 hours	2.1
3. Number of flights in last 24 hours	1
4. Time at controls this flight	Unknown
5. Number of hours duty last 24 hours	13
6. Total flight time	1062.0

7. Total time in model: 1062.0

8. Number of days grounded last month, give reason: Three - Upper Respiratory Infection

9. Number of and dates of previous accidents: None

SECTION E — CONTRIBUTING FACTORS AND THEIR ANALYSIS *(As condensed from Part I, Sect. D and Part VIII of the ARR)*

NOTE: Fill in this section only on that set of forms prepared for FIRST individual listed in Section A, i.e. 15(a). Attach additional sheets as necessary.

See Part VIII, AAR, "The Analysis."

☆U. S. GOVERNMENT PRINTING OFFICE: 1960—576568

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 3

OPNAV FORM 3750-8B (5-58) OPNAV REPORT 3750-7

SECTION F - SAFETY, PERSONAL, AND SURVIVAL EQUIPMENT

Prepare a narrative account of damaged or failed items. Identify each item discussed (e.g., F1, F2, etc.)

NAME OF INDIVIDUAL *(Last, first, middle)*: MOSELER, Kenneth J.

MODEL A/C: P2V-5FS

GENERAL DESCRIPTION OF EQUIPMENT	AVAILABLE YES	AVAILABLE NO	SPECIFIC MODEL OR TYPE	UTILIZED YES	UTILIZED NO	FAILED YES	FAILED NO	DESCRIPTION OF DAMAGE TO EQUIPMENT
1. Shoulder harness		X						
2. Lap belt	X		NAF 1201-8B	X		X		Not found
3. Inertia reel		X						
4. G-Suit		X						
5. Pressure suit-full or partial		X						
6. Exposure suit		X						
7. Flight suit *(Other than above)*	X		Summer Flying	X		X		Burned
8. Helmet	X		APH-5	X		X		Burned (lying beside body)
9. Goggles/Eyeshield	X							
10. Shoes	X		Field Shoes	X		X		Burned
11. Gloves	X		Standard Issue		X			Not found
12. Life vest	X		Mae West		X			Not found
13. Life raft (2)	X		MK VII		X			Not found
14. OTHER:								
15. SIGNAL DEVICE - Flare *(Night)*	X		MK XIII		X			Not found
16. - Flare *(Day)*	X		MK XIII		X			Not found
17. - Dye marker	X		MK XIII		X			Not found
18. - Radio	X		AN/GRT-3		X			Not found
19. - Flashlight	X		Vest Light		X			Not found
20. - Mirror								
21. OTHER:								
22. SURVIVAL GEAR - Knife	X		Standard Issue		X			Not found
23. - First aid kit	X		PSK-2		X			Not found
24. - Shelter								
25. - Food								
26. OTHER:								
27. RESCUE - Vehicle								
28. - Sling, Net, Stretcher								
29. OTHER:								

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE

OXYGEN EQUIPMENT

1. MASK - MODEL OR TYPE: A-13A
2. MODIFICATIONS, IF ANY: None
3. REGULATOR - MODEL OR TYPE: 2872
4. MODIFICATIONS, IF ANY: None
5. PREFLIGHTED BY USER? ☐ YES ☒ NO
6. IF NO, WHY NOT: Not usual routine in P2V
7. LIST DISCREPANCIES NOTED BY PREFLIGHT CHECK:
8. OXYGEN SUPPLY: PRIOR TO FLIGHT ____ LITERS *(Liquid)* 1600 P.S.I. *(Gas)*; TIME OF ACCIDENT ____ LITERS *(Liquid)* 1600 P.S.I. *(Gas)*
9. WAS OXYGEN IN USE AT TIME OF ACCDT. ☐ YES ☒ NO
10. IF YES, WAS SELECTOR SETTING ☐ 100% ☐ NORMAL
11. WAS ALL OXYGEN EQUIPMENT NECESSARY FOR THIS FLIGHT AVAILABLE? IF NO, LIST ITEMS AND REASON WHY. ☐ YES ☐ NO
12. WAS OXYGEN MASK REMOVED AT ANY TIME IN FLIGHT? IF YES, GIVE DURATION AND REASON. ☐ NO ☐ YES

RELEASE DEVICES

13. TYPE CHUTE RELEASE DEVICE:
14. TYPE HARNESS RELEASE DEVICE:
15. WHEN WERE RELEASE DEVICES ACTIVATED?
16. WERE DIFFICULTIES ENCOUNTERED WITH RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
17. WERE DIFFICULTIES ENCOUNTERED AFTER ACTIVATING RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
18. WAS LIFE VEST INFLATED PRIOR TO ACTIVATING RELEASE DEVICES? IF YES, WHAT DIFFICULTIES DID THIS PRODUCE? ☐ YES ☐ NO

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-576564

(Continued on OPNAV FORM 3750-8C)

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, GROUND ACCIDENT - PAGE 4
OPNAV FORM 3750-8C (5-58)

OPNAV REPORT 3750-7

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE (Continued)

NAME OF INDIVIDUAL (Last, first, middle)

MOSELER, Kenneth Joseph

MODEL A/C: P2V-5FS

RESTRAINT HARNESS

19. INTEGRATED HARNESS SYSTEM, MODEL/TYPE

20. INTEGRATED? ☐ FULL ☐ PARTIAL

21. MODIFICATIONS, IF ANY STATE REASON

22. DID INTEGRATED HARNESS FIT PROPERLY? IF NO, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR
☐ NO ☐ YES

23. INTEGRATED HARNESS FITTING WAS CONDUCTED BY:
☐ WEARER ☐ FLIGHT SURGEON ☐ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

24. IF SHOULDER HARNESS WAS USED, WAS IT:
☐ LOCKED ☐ UNLOCKED ☐ TIGHT ☐ SLACK ☐ OTHER CONDITION

HELMET

25. TYPE HELMET: APH-5

26. LIST PRESCRIBED MODIFICATIONS: Nape strap

27. OTHER MODIFICATIONS AND REASON FOR THEM

28. DID HELMET FIT PROPERLY? IF NO, GIVE REASON
☒ YES ☐ NO

29. HELMET FITTING WAS CONDUCTED BY:
☒ WEARER ☐ FLIGHT SURGEON ☐ PARACHUTE RIGGER ☒ AVIATION EQUIPMENT OFFICER ☐ OTHER

PARACHUTE

30. TYPE CHUTE: N3CR

31. LAST PACKING DATE: 7-12-62

32. MODEL/TYPE BAILOUT OXYGEN

33. AUTOMATIC RIPCORD, IF INSTALLED (Model and type)
☐ NONE

34. DID AUTOMATIC RIPCORD FAIL? IF YES, WHY?
☐ NO

35. WAS RIPCORD ACTIVATION
☐ MANUAL ☐ AUTOMATIC?

36. IF MANUALLY ACTIVATED STATE REASON AND ANY DIFFICULTIES ENCOUNTERED

37. DID CHUTE OPEN IMMEDIATELY? IF NO, GIVE REASON
☐ YES ☐ NO

38. ALTITUDE THAT CHUTE OPENED
FEET

39. OPENING SHOCK WAS:
☐ SLIGHT ☐ MODERATE ☐ SEVERE

40. BODY ATTITUDE AT OPENING

41. CONDITION OF CHUTE AFTER OPENING

42. CHUTE OSCILLATION PRESENT:
☐ NONE ☐ SLIGHT ☐ MODERATE ☐ SEVERE

43. IF OSCILLATION WAS PRESENT, HOW WAS IT STOPPED?

44. WEATHER CONDITIONS DURING DESCENT (List in sequence)

45. TOPOGRAPHY OF LANDING SITE

46. WAS BAILOUT OXYGEN CONNECTED?
☐ BEFORE EXIT ☐ AFTER EXIT ☐ NO ☐ N.A.

47. WAS BAILOUT OXYGEN USED? IF NOT, WHY
☐ YES ☐ NO

48. WHEN WAS IT ACTIVATED?
☐ BEFORE EXIT ☐ AFTER EXIT

49. GIVE DIFFICULTIES ENCOUNTERED WITH BAILOUT OXYGEN AND THEIR CAUSE, IF ANY

50. WAS CHUTE HARNESS
☐ TIGHT ☐ SNUG ☐ LOOSE

51. WAS A SITTING POSITION IN SLING OBTAINED DURING DESCENT? IF NOT, WHY?
☐ NO ☐ YES ☐ NOT ATTEMPTED

52. SEAT CUSHION IF PROVIDED (Model/Type)
☐ NONE

53. WAS PARARAFT LANYARD CONNECTED TO LIFE VEST D RING? IF NOT, WHY?
☐ NO ☐ YES

54. LIST TYPE OF PARACHUTE TRAINING COMPLETED BY THIS INDIVIDUAL
☐ NONE Lectures and demonstrations

55. IF ATTEMPT WAS MADE TO RELEASE PARARAFT DURING DESCENT, WAS RELEASE ACTIVATED SUCCESSFULLY?
☐ YES ☐ NO

56. IF NO, GIVE REASON

OTHER

57. IF G-SUIT, EXPOSURE SUIT, FULL OR PARTIAL PRESSURE SUIT WAS WORN, DID IT FIT PROPERLY? IF NOT, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR.
☐ YES ☐ NO

58. WAS G-SUIT EQUIPPED WITH A SPRING-LOADED DISCONNECT ADAPTER? IF NO, GIVE REASON
☐ YES ☐ NO

59. LIST ALL ITEMS OF NON-STANDARD CLOTHING OR SURVIVAL EQUIPMENT UTILIZED

60. WAS ANY ITEM OF EQUIPMENT LOST? IF YES STATE ITEM, WHEN LOST, AND REASON FOR LOSS.
☐ NO ☐ YES

61. WAS ANY ITEM OF EQUIPMENT DISCARDED? IF YES, STATE ITEM, WHEN DISCARDED, AND REASON FOR DISCARD.
☐ NO ☐ YES

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498197

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 5

OPNAV REPORT 3750-7

OPNAV FORM 3750-8D (Rev. 5-58)

SECTION H - EMERGENCY EXIT FROM A/C AND SURVIVAL FACTORS

NAME OF INDIVIDUAL (Last, first, middle)	MODEL A/C
MOSELER, Kenneth J.	P2V-5FS

S	E	S-SUSPECTED, E-ESTABLISHED	REMARKS
		1. EJECTION - Attempted	
		2. - Accomplished	
		3. - Through canopy	
YES	NO	EJECTION DIFICULTIES ENCOUNTERED	IF YES, EXPLAIN DIFFICULTIES
		4. - Prior to	
		5. - During	
		6. - Subsequent to	
		7. Give type and model of seat used	
		8. BAILOUT - Attempted	
		- Accomplished	

9. ALTITUDE AT TIME OF EXIT (feet)	10. ATTITUDE OR MANEUVER OF A/C AT EXIT OR IMPACT	11. AIRSPEED
ABOVE SEA LEVEL _____ ABOVE TOPOGRAPHY _____	Wings level, slight nose up	90-110 knots

12. COLLISION OF A/C WITH	13. CONTROLLED?	14. POWER	15. WHEELS	16. FLAPS
[X] GROUND [ ] WATER	[X] YES [ ] NO [ ] UNKNOWN	[X] ON [ ] OFF	[X] UP [ ] DOWN	[ ] FULL [X] UP [ ] PARTIAL

17. CANOPY POSITION AT EXIT OR IMPACT	18. SEA STATE	19. AIR TEMP.	20. WATER TEMP.	21. A/C FLOATED	22. TIME IN WATER	23. TIME IN RAFT
[ ] OPEN [ ] CLOSED [ ] JETTISONED		88 °F	°F	SEC.		

BAIL OUT OR COLLISION WITH WATER OR GROUND

24. EXIT USED: None

25. IS THIS THE RECOMMENDED EXIT? IF NO STATE REASON FOR CHOICE. [ ] YES [ ] NO

26. DIFFICULTIES WITH THIS EXIT WERE [ ] IN REACHING [ ] IN OPENING [ ] IN EXITING

27. STATE NATURE OF DIFFICULTY

28. BODY POSITION DURING EXIT

29. LIST OTHER FACTORS NOT INDICATED ABOVE WHICH AFFECTED EXIT FROM A/C

Fatal injuries on impact with ground.

SURVIVAL FACTORS: Check factors below which are appropriate for this accident. Prepare a detailed narrative account of the factors checked below and attach to this form. Identify each item discussed by item number (e.g., H30, H31, etc.)

COMMUNICATIONS:		MAINTAINING BODY TEMPERATURE:	
	30. Communicated position prior to mishap		50. Items used as shelter
	31. Witnesses at scene		51. Items used as clothing
	32. Electronic signal devices		52. Fire
	33. Visual signal devices		53. OTHER:
	34. Auditory signal devices	ENVIRONMENTAL HAZARDS:	
	35. OTHER:		54. Exposure to natural forces
TRAVEL:			55. Exposure to dangerous animals and plants
	36. LAND		56. Unfriendly native population
	37. WATER		57. OTHER:
SHELTER:		MORALE:	
	38. Life raft		58. Isolation
	39. Parachute		59. Psychological shock
	40. A/C structure		60. Lack of motivation to survive
	41. Natural shelter		61. Boredom
	42. Man-made shelter		62. Rationing, activities, and group coordination
	43. OTHER:		63. OTHER:
WATER SOURCE:		FOOD SOURCE:	
	44. Desalter kit, seawater or solar still		64. Prepared survival rations
	45. Rain, dew, snow, ice, etc.		65. Animals/plants
	46. Processed beverages		66. OTHER:
	47. Canteen, thermos, water breaker, etc.	SURVIVAL TRAINING RECEIVED PRIOR TO MISHAP	
	48. Streams, ponds, wells, etc.		67.
	49. OTHER:		

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498196

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 6

OPNAV FORM 3750-8E (Rev. 5-58)

OPNAV REPORT 3750-7

SECTION I - PATHOLOGICAL FACTORS (Use A to denote ANTE MORTEM; P for POST MORTEM, when known and applicable.)

1. NAME OF INDIVIDUAL (Last, first, middle)				MODEL A/C
MOSELER, Kenneth J.				P2V-5FS
2. AGE	**3. HEIGHT**	**4. WEIGHT**	**5. LOCATION AND DIRECTION FACING AT TIME OF ACCIDENT**	**6. INJURY CODE**
22	67 INCHES	160	Flight deck	A

7. UNCONSCIOUSNESS: [ ] SHORT DURATION LITTLE SIGNIFICANCE [ ] OTHER (give time)

8. INTERNAL INJURIES (Non-fatal cases)

HEAD INJURIES

9. CEREBRAL CONCUSSION: [ ] MINOR [ ] SERIOUS [ ] CRITICAL [X] FATAL

10. FACIAL INJURIES (n.e.c.): Charring

11. INTRA-ORAL INJURIES

12. MINOR EYE INJURIES: [ ] RIGHT [ ] LEFT

13. MAJOR EYE INJURIES: [X] RIGHT [X] LEFT

14. TYPE OF FRACTURE

	SKULL		VERTEBRAE (Specify No.)					SHOULDER GIRDLE	RIBS	PELVIS	UPPER ARM		LOWER ARM		HAND		UPPER LEG		LOWER LEG		FOOT	
	CRAN.	FACIAL	CERV.	THOR.	LUMBAR	SACRAL	COCCYX				R	L	R	L	R	L	R	L	R	L	R	L
SIMPLE																						
COMPOUND																						
COMMINUTED									X	X												
DIS-LOCATION		JAW									SHOULDER		ELBOW		WRIST		HIP		KNEE		ANKLE	
															HAND						FOOT	

15. AMPUTATIONS/AVULSIONS (State Parts)

(b) (6)

16. LIST PRE-EXISTING PHYSICAL DEFECTS PRESENT AT TIME OF POST CRASH EXAMINATION

None

17. SOFT TISSUE INJURIES

		LACERATIONS			CONTUSION/SPRAIN/STRAIN			ABRASIONS		
		MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE
HEAD (e.e.g.)	VENTRAL									
	DORSAL									
NECK										
THORAX	VENTRAL									
	DORSAL									
ABDOMEN	VENTRAL									
	DORSAL									
EXTREMITIES	UPPER									
	LOWER									

18. [ ] DROWNED

19. [ ] ASPHYXIATED

20. SHOCK: [ ] MILD [ ] MODERATE [X] SEVERE

21. EXPOSURE: [ ] MILD [ ] MODERATE [X] SEVERE

22. [X] BURNS [ ] FROST BITE

DEGREE	HEAD (ventral)	HEAD (Dorsal)	TRUNK (ventral)	TRUNK (Dorsal)	ARMS	LEGS
1ST						
2ND						
3RD	X	X	X	X	X	X

23. EXTENT OF CARBONIZATION: [ ] NONE [X] COMPLETE (almost)

ARE TISSUE SPECIMENS OBTAINABLE? [ ] YES [X] NO

NOTE: Attach a detailed narrative account of injuries, cause, structures causing injury, magnitudes of force, and include whether ANTE- OR POST-MORTEM if determined. It is necessary to give as clear a picture of injury cause and sequence as possible.

24. ADMITTED TO SICK LIST? IF YES, GIVE DIAGNOSIS: [X] YES [ ] NO — for record purpose only

25. DIAGNOSIS NO. (NAVMED P-1294)

26. ESTIMATED STAY ON SICK LIST: DAYS

27. GROUNDED? IF YES GIVE REASON: [ ] YES [X] NO

28. ESTIMATED DURATION: DAYS

29. PRIMARY CAUSE OF DEATH (Use Basic Diagnostic Nomenclature, NAVMED P-1294): Injuries, multiple, extreme NO. 8651

30. SECONDARY CAUSE OF DEATH: Burn, NEC, 100%, 3° NO. 8403

31. AUTOPSY PERFORMED? [X] YES [ ] NO

32. PROTOCOL: [X] ATTACHED [ ] WILL BE FORWARDED

33. AUTOPSY CONDUCTED BY: [X] PATHOLOGIST [ ] FLIGHT SURGEON

IF FLIGHT SURGEON DOES AUTOPSY USE "AUTOPSY GUIDE FOR A/C ACCIDENT FATALITIES", AFIP. 1957.

34. SPECIMEN	TEST PERFORMED	RESULTS	SPECIMEN	TEST PERFORMED	RESULTS
BLOOD: 1			TISSUE: (CNS)		
2			- MUSCLE		
3			- VISCERA		
URINE			OTHER:		
GI CONTENTS					

35. IF ULTRAVIOLET LIGHT OR OTHER SPECIALIZED INVESTIGATIVE PROCEDURES WERE USED AT THE MISHAP SITE OR AUTOPSY, LIST THEM IN THIS SPACE. FOR EACH ENTRY IN THIS SPACE A NARRATIVE ACCOUNT OF THEIR RESULTS AND INTERPRETATION WILL BE ATTACHED.

U. S. GOVERNMENT PRINTING OFFICE: 1959—496198

AUTOPSY: A-83-62

Name: MOSELER, Kenneth Joseph
Race: Caucasian
Died: 7-23-62, 1044

Age:
Sex: Male
Autopsy: 7-25-62, 0930

CLINICAL SUMMARY: This person was a crew member of the Navy P2V patrol bomber which crashed 7-23-62. (See 1st para. Autopsy 82-62 for further details of that crash).

EXTERNAL EXAMINATION: (b) (6) [redacted]

SUMMARY OF GROSS FINDINGS: (b) (6) [redacted]

GROSS PATHOLOGIC DIAGNOSES: Injuries, multiple, extreme:

1. (b) (6) [redacted]
2.
3.
4.

CAUSE OF DEATH: Injuries, multiple, extreme (Aircraft accident).

(b) (6) [redacted]
LCDR MC USN

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT—Page 2

OPNAV FORM 3750-8A (REV. 5-58) OPNAV REPORT 3750-7

SECTION C—PHYSIOLOGICAL, HUMAN ENGINEERING, DESIGN, SOCIO-PSYCHOLOGICAL, AND TRAINING FACTORS WHICH CONTRIBUTED IN SOME DEGREE TO THIS A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT

NAME OF INDIVIDUAL (*Last, first, middle*): WILLIS, Harry C.

MODEL A/C: P2V-5FS

Check E-Established, S-Suspected, or P-Present for each factor selected. Additional 8X10½ plain sheets will be used for the supporting account of items checked below. Identify each statement with the factor and section identification (e.g., C1, C2, etc.). Attach all sheets pertaining to these factors to this form upon completion.

E	S	P	✓ FACTORS
			PHYSIOLOGICAL:
			1. Physically incapacitated in flight
			2. "G" forces
			3. Environmental stress - External
			4. - Internal
			5. Dysbarism/explosive decompression
			6. Diet
			7. Fatigue
			8. Hypoxia
			9. Related illness
			10. Vertigo/Disorientation/Illusions
			11. Hyperventilation
			12. Drugs
			13. Physical state
			14. OTHER:
			HUMAN ENGINEERING AND DESIGN:
			15. Personal equipment
			16. Displays and/or controls
			17. Work arrangement
			18. Working environment
			19. Habit interference
			20. OTHER:
			SOCIO-PSYCHOLOGICAL: (*Emotional stress from non-duty sources*)
			21. Pregnancy
			22. Illness or death
			23. Arguments
			24. Elated/Depressed state
			25. Personal habits - Drinking
			26. - Sex
			27. - Gambling
			28. - Debts

E	S	P	✓ FACTORS
			SOCIO-PSYCHOLOGICAL: (*Emotional stress from duty sources*)
			29. Expeditings/Delays
			30. Weather
			31. Mechanical Problems
			32. Social and working relationships
			33. Personal comfort
			34. Regulations
			35. Facilities
			36. Navigation
			37. Duty assignment
			38. Personality traits
			NON-STRESS FACTORS:
			39. Faulty attention
			40. Poor judgement
			41. Forgetfulness
			42. OTHER SOCIO-PSYCHOLOGICAL FACTORS
			TRAINING FACTORS:
			43. Physiological training
			44. Emergency Procedures training
			45. Survival and rescue training
			46. Refresher training
			47. Transition training
			48. OTHER:

SECTION D — AIR CREW DATA (*fill in where applicable*)

1. Flight time past 30 days	8.1	7. Total time in model	8.1
2. Flight time last 24 hours	2.1	8. Number of days grounded last month, give reason	None
3. Number of flights in last 24 hours	1		
4. Time at controls this flight	Unknown	9. Number of and dates of previous accidents	None
5. Number of hours duty last 24 hours	3.5		
6. Total flight time	8.1		

SECTION E — CONTRIBUTING FACTORS AND THEIR ANALYSIS (*As condensed from Part I, Sect. D and Part VIII of the ARR*)

NOTE: Fill in this section only on that set of forms prepared for FIRST individual listed in Section A, i.e. 15(a). Attach additional sheets as necessary.

See Part VIII, AAR, "The Analysis".

☆U. S. GOVERNMENT PRINTING OFFICE: 1960—576568

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 3

OPNAV FORM 3750-8B (5-58) — OPNAV REPORT 3750-7

SECTION F - SAFETY, PERSONAL, AND SURVIVAL EQUIPMENT

Prepare a narrative account of damaged or failed items. Identify each item discussed (e.g., F1, F2, etc.)

NAME OF INDIVIDUAL *(Last, first, middle)*: WILLIS, Harry C.

MODEL A/C: P2V-5FS

GENERAL DESCRIPTION OF EQUIPMENT	AVAILABLE YES	AVAILABLE NO	SPECIFIC MODEL OR TYPE	UTILIZED YES	UTILIZED NO	FAILED YES	FAILED NO	DESCRIPTION OF DAMAGE TO EQUIPMENT
1. Shoulder harness		X						
2. Lap belt	X		NAF 1201-8B	X		X		Not found
3. Inertia reel		X						
4. G-Suit		X						
5. Pressure suit-full or partial		X						
6. Exposure suit		X						
7. Flight suit *(Other than above)*	X		Summer Flying	X		X		Burned
8. Helmet	X		APH-5	X		X		Not found
9. Goggles/Eyeshield	X							
10. Shoes	X		Field Shoes	X		X		Burned
11. Gloves	X		Standard Issue		X			Not found
12. Life vest	X		Mae West		X			Not found
13. Life raft (2)	X		MK VII		X			Not found
14. OTHER:								
15. SIGNAL DEVICE - Flare *(Night)*	X		MK XIII		X			Not found
16. - Flare *(Day)*	X		MK XIII		X			Not found
17. - Dye marker	X		MK XIII		X			Not found
18. - Radio	X		AN/GRT-3		X			Not found
19. - Flashlight	X		Vest Light		X			Not found
20. - Mirror								
21. OTHER:								
22. SURVIVAL GEAR - Knife	X		Standard Issue		X			Not found
23. - First aid kit	X		PSK 11		X			Not found
24. - Shelter								
25. - Food								
26. OTHER:								
27. RESCUE - Vehicle								
28. - Sling, Net, Stretcher								
29. OTHER:								

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE

OXYGEN EQUIPMENT

1. MASK - MODEL OR TYPE: A-13A
2. MODIFICATIONS, IF ANY: None
3. REGULATOR - MODEL OR TYPE: 2872
4. MODIFICATIONS, IF ANY: None
5. PREFLIGHTED BY USER? ☐ YES ☒ NO
6. IF NO, WHY NOT: Not usual routine in P2V
7. LIST DISCREPANCIES NOTED BY PREFLIGHT CHECK:
8. OXYGEN SUPPLY: PRIOR TO FLIGHT ____ LITERS *(Liquid)* 1600 P.S.I. *(Gas)*; TIME OF ACCIDENT ____ LITERS *(Liquid)* 1600 P.S.I. *(Gas)*
9. WAS OXYGEN IN USE AT TIME OF ACCDT. ☐ YES ☒ NO
10. IF YES, WAS SELECTOR SETTING ☐ 100% ☐ NORMAL
11. WAS ALL OXYGEN EQUIPMENT NECESSARY FOR THIS FLIGHT AVAILABLE? IF NO, LIST ITEMS AND REASON WHY.: ☐ YES ☐ NO
12. WAS OXYGEN MASK REMOVED AT ANY TIME IN FLIGHT? IF YES, GIVE DURATION AND REASON. ☐ NO ☐ YES

RELEASE DEVICES

13. TYPE CHUTE RELEASE DEVICE:
14. TYPE HARNESS RELEASE DEVICE:
15. WHEN WERE RELEASE DEVICES ACTIVATED?
16. WERE DIFFICULTIES ENCOUNTERED WITH RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
17. WERE DIFFICULTIES ENCOUNTERED AFTER ACTIVATING RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. ☐ YES ☐ NO
18. WAS LIFE VEST INFLATED PRIOR TO ACTIVATING RELEASE DEVICES? IF YES, WHAT DIFFICULTIES DID THIS PRODUCE? ☐ YES ☐ NO

(Continued on OPNAV FORM 3750-8C)

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-876364

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, GROUND ACCIDENT - PAGE 4
OPNAV FORM 3750-8C (5-58)

OPNAV REPORT 3750-7

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE (Continued)

NAME OF INDIVIDUAL (Last, first, middle)

WILLIS, Harry Charles

MODEL A/C: P2V-5FS

RESTRAINT HARNESS

19. INTEGRATED HARNESS SYSTEM, MODEL/TYPE

20. INTEGRATED? ☐ FULL ☐ PARTIAL

21. MODIFICATIONS, IF ANY STATE REASON

22. DID INTEGRATED HARNESS FIT PROPERLY? IF NO, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR
☐ NO ☐ YES

23. INTEGRATED HARNESS FITTING WAS CONDUCTED BY:
☐ WEARER ☐ FLIGHT SURGEON ☐ PARACHUTE RIGGER ☐ AVIATION EQUIPMENT OFFICER ☐ OTHER

24. IF SHOULDER HARNESS WAS USED, WAS IT:
☐ LOCKED ☐ UNLOCKED ☐ TIGHT ☐ SLACK ☐ OTHER CONDITION

HELMET

25. TYPE HELMET: APH-5

26. LIST PRESCRIBED MODIFICATIONS: Nape strap

27. OTHER MODIFICATIONS AND REASON FOR THEM

28. DID HELMET FIT PROPERLY? IF NO, GIVE REASON
☒ YES ☐ NO

29. HELMET FITTING WAS CONDUCTED BY:
☒ WEARER ☐ FLIGHT SURGEON ☐ PARACHUTE RIGGER ☒ AVIATION EQUIPMENT OFFICER ☐ OTHER

PARACHUTE

30. TYPE CHUTE: N3CR

31. LAST PACKING DATE: 7-12-62

32. MODEL/TYPE BAILOUT OXYGEN

33. AUTOMATIC RIPCORD, IF INSTALLED (Model and type)
☐ NONE

34. DID AUTOMATIC RIPCORD FAIL? IF YES, WHY?
☐ NO

35. WAS RIPCORD ACTIVATION
☐ MANUAL ☐ AUTOMATIC?

36. IF MANUALLY ACTIVATED STATE REASON AND ANY DIFFICULTIES ENCOUNTERED

37. DID CHUTE OPEN IMMEDIATELY? IF NO, GIVE REASON
☐ YES ☐ NO

38. ALTITUDE THAT CHUTE OPENED
FEET

39. OPENING SHOCK WAS:
☐ SLIGHT ☐ MODERATE ☐ SEVERE

40. BODY ATTITUDE AT OPENING

41. CONDITION OF CHUTE AFTER OPENING

42. CHUTE OSCILLATION PRESENT:
☐ NONE ☐ SLIGHT ☐ MODERATE ☐ SEVERE

43. IF OSCILLATION WAS PRESENT, HOW WAS IT STOPPED?

44. WEATHER CONDITIONS DURING DESCENT (List in sequence)

45. TOPOGRAPHY OF LANDING SITE

46. WAS BAILOUT OXYGEN CONNECTED?
☐ BEFORE EXIT ☐ AFTER EXIT ☐ NO ☐ N.A.

47. WAS BAILOUT OXYGEN USED? IF NOT, WHY
☐ YES ☐ NO

48. WHEN WAS IT ACTIVATED?
☐ BEFORE EXIT ☐ AFTER EXIT

49. GIVE DIFFICULTIES ENCOUNTERED WITH BAILOUT OXYGEN AND THEIR CAUSE, IF ANY

50. WAS CHUTE HARNESS
☐ TIGHT ☐ SNUG ☐ LOOSE

51. WAS A SITTING POSITION IN SLING OBTAINED DURING DESCENT? IF NOT, WHY?
☐ NO ☐ YES ☐ NOT ATTEMPTED

52. SEAT CUSHION IF PROVIDED (Model/Type)
☐ NONE

53. WAS PARARAFT LANYARD CONNECTED TO LIFE VEST D RING? IF NOT, WHY?
☐ NO ☐ YES

54. LIST TYPE OF PARACHUTE TRAINING COMPLETED BY THIS INDIVIDUAL
☐ NONE Lectures and demonstrations

55. IF ATTEMPT WAS MADE TO RELEASE PARARAFT DURING DESCENT, WAS RELEASE ACTIVATED SUCCESSFULLY?
☐ YES ☐ NO

56. IF NO, GIVE REASON

OTHER

57. IF G-SUIT, EXPOSURE SUIT, FULL OR PARTIAL PRESSURE SUIT WAS WORN, DID IT FIT PROPERLY? IF NOT, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR.
☐ YES ☐ NO

58. WAS G-SUIT EQUIPPED WITH A SPRING-LOADED DISCONNECT ADAPTER? IF NO, GIVE REASON
☐ YES ☐ NO

59. LIST ALL ITEMS OF NON-STANDARD CLOTHING OR SURVIVAL EQUIPMENT UTILIZED

60. WAS ANY ITEM OF EQUIPMENT LOST? IF YES STATE ITEM, WHEN LOST, AND REASON FOR LOSS.
☐ NO ☐ YES

61. WAS ANY ITEM OF EQUIPMENT DISCARDED? IF YES, STATE ITEM, WHEN DISCARDED, AND REASON FOR DISCARD.
☐ NO ☐ YES

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498197

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 5

OPNAV FORM-3750-8D (Rev. 5-58)

OPNAV REPORT 3750-7

SECTION H - EMERGENCY EXIT FROM A/C AND SURVIVAL FACTORS

NAME OF INDIVIDUAL (*Last, first, middle*): **WILLIS, Harry C.**

MODEL A/C: **P2V-5FS**

S	E	S-SUSPECTED, E-ESTABLISHED	REMARKS
		1. EJECTION - Attempted	
		2. - Accomplished	
		3. - Through canopy	
YES	NO	EJECTION DIFICULTIES ENCOUNTERED	IF YES, EXPLAIN DIFFICULTIES
		4. - Prior to	
		5. - During	
		6. - Subsequent to	
		7. Give type and model of seat used	
		8. BAILOUT - Attempted	
		- Accomplished	

9. ALTITUDE AT TIME OF EXIT (*feet*): ABOVE SEA LEVEL _____ ABOVE TOPOGRAPHY _____

10. ATTITUDE OR MANEUVER OF A/C AT EXIT OR IMPACT: **Wings level, slight nose up**

11. AIRSPEED: **90-110 knots**

12. COLLISION OF A/C WITH: [X] GROUND [ ] WATER

13. CONTROLLED? [X] YES [ ] NO [ ] UNKNOWN

14. POWER [X] ON [ ] OFF

15. WHEELS [X] UP [ ] DOWN

16. FLAPS [ ] FULL [X] UP [ ] PARTIAL

17. CANOPY POSITION AT EXIT OR IMPACT [ ] OPEN [ ] CLOSED [ ] JETTISONED

18. SEA STATE:

19. AIR TEMP.: 88 °F

20. WATER TEMP.: °F

21. A/C FLOATED: SEC.

22. TIME IN WATER:

23. TIME IN RAFT:

BAIL OUT OR COLLISION WITH WATER OR GROUND

24. EXIT USED: **None**

25. IS THIS THE RECOMMENDED EXIT? IF NO STATE REASON FOR CHOICE. [ ] YES [ ] NO

26. DIFFICULTIES WITH THIS EXIT WERE [ ] IN REACHING [ ] IN OPENING [ ] IN EXITING

27. STATE NATURE OF DIFFICULTY

28. BODY POSITION DURING EXIT

29. LIST OTHER FACTORS NOT INDICATED ABOVE WHICH AFFECTED EXIT FROM A/C

Fatal injuries on impact with ground.

SURVIVAL FACTORS: **Check factors below which are appropriate for this accident. Prepare a detailed narrative account of the factors checked below and attach to this form. Identify each item discussed by item number (e.g., H30, H31, etc.)**

COMMUNICATIONS:		MAINTAINING BODY TEMPERATURE:	
	30. Communicated position prior to mishap		50. Items used as shelter
	31. Witnesses at scene		51. Items used as clothing
	32. Electronic signal devices		52. Fire
	33. Visual signal devices		53. OTHER:
	34. Auditory signal devices	ENVIRONMENTAL HAZARDS:	
	35. OTHER:		54. Exposure to natural forces
TRAVEL:			55. Exposure to dangerous animals and plants
	36. LAND		56. Unfriendly native population
	37. WATER		57. OTHER:
SHELTER:		MORALE:	
	38. Life raft		58. Isolation
	39. Parachute		59. Psychological shock
	40. A/C structure		60. Lack of motivation to survive
	41. Natural shelter		61. Boredom
	42. Man-made shelter		62. Rationing, activities, and group coordination
	43. OTHER:		63. OTHER:
WATER SOURCE:		FOOD SOURCE:	
	44. Desalter kit, seawater or solar still		64. Prepared survival rations
	45. Rain, dew, snow, ice, etc.		65. Animals/plants
	46. Processed beverages		66. OTHER:
	47. Canteen, thermos, water breaker, etc.	SURVIVAL TRAINING RECEIVED PRIOR TO MISHAP	
	48. Streams, ponds, wells, etc.		67.
	49. OTHER:		

★ U. S. GOVERNMENT PRINTING OFFICE: 1959—498196

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 6

OPNAV REPORT 3750-7

OPNAV FORM 3750-8E (Rev. 5-58)

SECTION 1 - PATHOLOGICAL FACTORS (Use A to denote ANTE MORTEM: P for POST MORTEM, when known and applicable.)

1. NAME OF INDIVIDUAL (Last, first, middle)				MODEL A/C
WILLIS, Harry C.				P2V-5FS
2. AGE	**3. HEIGHT**	**4. WEIGHT**	**5. LOCATION AND DIRECTION FACING AT TIME OF ACCIDENT**	**INJURY CODE**
24	74 INCHES	147	Radio compartment	A

7. UNCONSCIOUSNESS: ☐ SHORT DURATION LITTLE SIGNIFICANCE ☐ OTHER (give time)

8. INTERNAL INJURIES (Non-fatal cases)

HEAD INJURIES

9. CEREBRAL CONCUSSION: ☐ MINOR ☐ SERIOUS ☒ CRITICAL ☐ FATAL

10. FACIAL INJURIES (B. t. c.): Charring

11. INTRA-ORAL INJURIES

12. MINOR EYE INJURIES: ☐ RIGHT ☐ LEFT

13. MAJOR EYE INJURIES: ☒ RIGHT ☒ LEFT

14. TYPE OF FRACTURE

	SKULL		VERTEBRAE (Specify No.)					SHOULDER GIRDLE	RIBS	PELVIS	UPPER ARM		LOWER ARM		HAND		UPPER LEG		LOWER LEG		FOOT	
	CRAN.	FACIAL	CERV.	THOR.	LUMBAR	SACRAL	COCCYX				R	L	R	L	R	L	R	L	R	L	R	L
SIMPLE																						
COMPOUND		X																				
COMMINUTED																						
DIS-LOCATION		JAW									SHOULDER		ELBOW		WRIST		HIP		KNEE	X	ANKLE	
															HAND						FOOT	

15. AMPUTATIONS/AVULSIONS (State Parts)

(b) (6) [redacted]

16. LIST PRE-EXISTING PHYSICAL DEFECTS PRESENT AT TIME OF POST CRASH EXAMINATION

(b) (6) [redacted]

17. SOFT TISSUE INJURIES

		LACERATIONS			CONTUSION/SPRAIN/STRAIN			ABRASIONS		
		MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE
HEAD (B. t. c.)	VENTRAL									
	DORSAL									
NECK										
THORAX	VENTRAL									
	DORSAL									
ABDOMEN	VENTRAL									
	DORSAL									
EXTREMITIES	UPPER									
	LOWER									

18. ☐ DROWNED

19. ☐ ASPHYXIATED

20. SHOCK: ☐ MILD ☐ MODERATE ☒ SEVERE

21. EXPOSURE: ☐ MILD ☐ MODERATE ☒ SEVERE

22.

		1ST	2ND	3RD	1ST	2ND	3RD	1ST	2ND	3RD
☒ BURNS	DEGREE			X			X			X
☐ FROST BITE	AREA	HEAD (ventral)		Dorsal)	TRUNK (ventral		Dorsal)	ARMS		LEGS
		X		X	X		X	X		X

23. EXTENT OF CARBONIZATION: ☐ NONE ☐ COMPLETE (almost)

ARE TISSUE SPECIMENS OBTAINABLE? ☒ YES ☐ NO

NOTE: Attach a detailed narrative account of injuries, cause, structures causing injury, magnitudes of force, and include whether ANTE- OR POST-MORTEM if determined. It is necessary to give as clear a picture of injury cause and sequence as possible.

24. ADMITTED TO SICK LIST? IF YES, GIVE DIAGNOSIS

☒ YES ☐ NO for record purpose only

25. DIAGNOSIS NO. (NAVMED P-1294)

26. ESTIMATED STAY ON SICK LIST DAYS

27. GROUNDED? IF YES GIVE REASON

☐ YES ☒ NO

28. ESTIMATED DURATION DAYS

29. PRIMARY CAUSE OF DEATH (Use Basic Diagnostic Nomenclature, NAVMED P-1294)

Undetermined (See autopsy report)

30. SECONDARY CAUSE OF DEATH

Burn, NEC, 100%, 30 NO. 8403

31. AUTOPSY PERFORMED? ☒ YES ☐ NO

32. PROTOCOL ☒ ATTACHED ☐ WILL BE FORWARDED

33. AUTOPSY CONDUCTED BY ☒ PATHOLOGIST ☐ FLIGHT SURGEON

IF FLIGHT SURGEON DOES AUTOPSY USE "AUTOPSY GUIDE FOR A/C ACCIDENT FATALITIES", AFIP. 1957.

34. SPECIMEN	TEST PERFORMED	RESULTS	SPECIMEN	TEST PERFORMED	RESULTS
BLOOD: 1			TISSUE: (CNS)		
2			MUSCLE		
3			VISCERA		
URINE			OTHER:		
G.I CONTENTS					

35. IF ULTRAVIOLET LIGHT OR OTHER SPECIALIZED INVESTIGATIVE PROCEDURES WERE USED AT THE MISHAP SITE OR AUTOPSY, LIST THEM IN THIS SPACE. FOR EACH ENTRY IN THIS SPACE A NARRATIVE ACCOUNT OF THEIR RESULTS AND INTERPRETATION WILL BE ATTACHED.

☆ U. S. GOVERNMENT PRINTING OFFICE : 1960-576381

D-88973

AUTOPSY: A-81-62

Name: WILLIS, Harry Charles
Race: Caucasian
Died: 7-23-1044

Age: 24
Sex: Male
Autopsy: 7-24-62, 1300

PREFACE: This body is one of seven recovered in connection with a P2V aircraft accident in the region of Brunswick, Georgia on 23 July 1962. Identification is by means of dental records.

GROSS DESCRIPTION OF THE BODY: The body is that of a white male. [redacted]

(b) (6)

HEAD: [redacted]

(b) (6)

NECK: [redacted]

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(Continued):

AUTOPSY: A-81-62 Name: WILLIS, Harry Charles

INCISION: The usual Y-shaped thoracoabdominal incision is utilized.

CHEST: (b) (6) [redacted]

HEART: (b) (6) [redacted]

LUNGS: (b) (6) [redacted]

LIVER: (b) (6) [redacted]

SPLEEN: (b) (6) [redacted]

KIDNEYS: (b) (6) [redacted]

PANCREAS: (b) (6) [redacted]

GASTROINTESTINAL TRACT: (b) (6) [redacted]

AUTOPSY: A-81-62 Name: WILLIS, Harry Charles

(b) (6) [redacted]

COMMENT: Separation of the injuries seen in this individual into ante-mortem versus post-mortem, or into ante-thermal versus post-thermal periods with any degree of certainity is impossible.

(b) (6) [redacted]

PATHOLOGIC DIAGNOSES: 1. (b) (6) [redacted]
2.
3.

PRESUMPTIVE CAUSE OF DEATH: No single feature determined.

(b) (6) [redacted], LCDR MC USN

F-29 - Statement concerning PEARSON, J. H., AN, (b) (6) [redacted]

Immediately after the accident, rescue operations began with the S.A.R. helicopter launched with the Flight Surgeon and two members of the crash crew. Unable to land near the crash, he set down in a small clearing approximately one-quarter mile from the crash scene. Both members of the crash crew were dressed in full fire-fighting equipment consisting of gloves, coat, pants and boots. All three rapidly became separated in trying to proceed as fast as possible through extremely heavy underbrush. The Flight Surgeon and one fire fighter arrived at the crash scene but due to numerous personnel who had arrived by trucks milling around it was some time after the crash that the other member of the fire-fighting team was missing. Immediate steps were taken to send out search parties and bring the S.A.R. helicopter back into service. Two hours later the missing man was found dead lying on the ground face down. He was still wearing the fire-fighting coat, pants and boots. He evidently had lost his gloves and helmet.

The body was found approximately 300 yards west of the scene and about 500 yards from his original starting point. From other witnesses' statements was noted that once entering the underbrush all sense of direction was lost and he could have easily traveled in circles in trying to reach the crash.

He was transported to USNH, Jacksonville, Florida where an autopsy was performed. The gross pathological findings indicated 3° burns to back and feet, heat exhaustion and pulmonary edema from possible inhalation of smoke or hot air.

The autopsy gives credence to the fact that he at one time did reach the area of the crash but because of the extreme heat ran away and died from a combination of burns from the crash and heat exhaustion.

This enclosure is included to suggest that members of crash crews should remove all heavy clothing when not actively engaging in rescue or fire-fighting operations. Because of the heavy insulation and extremely limited ventilation, heat exhaustion can occur in a very short time when outside temperatures are in the high 80's or low 90's.

A separate investigation is being conducted by NAS, Glynco, Georgia, and this brief resume is submitted only in the interest of safety information.

THE TAPE

The tape recording that was made, as a matter of standard practice, by the controlling GCA unit, is a unique article of evidence in that an apparently stuck microphone button in the cockpit of the aircraft caused sounds in the cockpit to be transmitted over UHF and therefore recorded. The GCA approach was the fourth for the aircraft and all approaches seemed to be normal in all respects. The GCA unit used a student controller. The aircraft flight evolutions during the fourth approach were apparently smooth and well coordinated members of the Aircraft Accident Board identified the voice of the pilot acknowledging for GCA transmissions during the approach as that of LT McHUGH. "Spangle 12" (the tactical voice call of the aircraft) came down the glide path holding just slightly above the glide path two and one half miles from the GCA touchdown point which is located 500 feet from the end of the runway. By one mile "Spangle 12" was on the glide path and receiving small heading corrections utilizing no gyro approach procedures. At one quarter mile the GCA controller advised the pilot that he was on glide path at precision minimums and should take over visually. At this point the runway centerline was reported straight ahead. The aircraft was observed, on radar, to level off as it passed over the end of the runway. "Spangle 12" was advised to climb straight ahead to 500 feet upon completion of the low pass. Twenty-four seconds after passing over GCA touchdown point the voice of LT BROUGHTON as identified by

ENCLOSURE 7

members of the board started to roger for the last transmission of the GCA Controller. From this point on the mike button remained depressed and cockpit sounds were transmitted. LT BROUGHTON's transmission was interrupted. Four seconds later the sound of ANDERSON's voice, remote from the transmitting microphone and identified by enlisted personnel familiar with his voice, shouted "Feather it! Feather it! Feather." Two seconds after the third "Feather" there was a noticeable decrease in the engine noise being transmitted. Six seconds later there was a sound similar to a muffled explosion transmitted, seven seconds later a crunching sound, one second later LT BROUGHTON's voice transmitted "were going in, this is Spangle 12", and 21 seconds later what appears to be the final impact sound, was transmitted from the aircraft.

ENCLOSURE 7

Statement of LT (b) (6) (b) (6) MC, USN, concerning his activities following the crash of the P2V-5 west of USNAS Glynco on 23 July 1962.

Upon notification of the crash the field ambulance was dispatched to the rendevous with the helicopter. After my corpsman and I entered the helicopter, it took off and proceeded to the crash site. East of the runway it descended and picked up two members of the firefighting crew, who were clad in their asbestos suits. This necessitated leaving my corpsman in the clearing. The pilot circled the crash site several times. I could only catch brief glances from the window and I had no idea where we were in relation to the base or as to compass points. We landed in a clearing some distance from the crash and the two firefighters disembarked. I remained in the helicopter. We circled the crash site again. I caught a glimpse of fire fighting equipment approaching the site. We descended into a clearing which I thought to be the same clearing in which we had previously landed.

Equipped with a Blanket Roll, First Aid Kit, and a Surgical Tray, I surveyed the clearing. I could see the smoke of the crash beyond in a clump of trees. Very shortly I was approached by a civilian truck. The three men in the truck had been employed in tapping pine trees and knew the region. They offered to drive me to the site of the crash. We proceeded down a confusing array of backwoods paths. We were joined by a group of Navy vehicles consisting of the ambulance I had left, a pickup truck and other vehicles. We stopped at a very dense section of trees and began to travel by foot. We encountered severe undergrowth. It consisted of small shrubs that grew close to the ground, larger shrubs that grew to about eight feet in height, and thorny vines that grew up pine trees and through the shrubs. We proceeded by breaking down the shrubs, feeling our way around them, or crawling under them. We also forded several small patches of mud. Once we were in this thicket we were unable to see the smoke of the crash.

Had it not been for the three civilian volunteers we could never have reached the crash site from the direction in which we started. As we were advancing we heard the fire and several small explosions.

When we arrived at the site we found a crash truck had arrived and foamed the crash site. It had temporarily extinguished a fire that would otherwise have swept down upon us.

LT (b) (6) (who had been in the convoy which we had met) and I were the first two officers on the scene. We approached the crash as closely as we could but we could see neither sign of life nor any remains. We consolidated all our forces. We were shortly joined by a number of firefighters and several officers from the base including the Executive Officer, the Operations Officer, the two Public Works Officers, the Acting Safety Officer, the Maintenance Duty Officer and others. This group and all subsequent groups approached the crash site from the opposite direction to the one that my group had used. The only sign of personal equipment which I found was one standard hardhat which was later destroyed by fire.

ENCLOSURE 8

Statement of LT (b) (6) (b) (6) MC, USN, concerning his activities following the crash of the P2V-5 west of USNAS, Glynco on 23 July 1962; continued:

My immediate efforts were in caring for the firefighters who were felled by heat exhaustion. Several of the firefighters had gone into the wreckage in a futile effort to find survivors. The fire had spread from the wreckage to the woods. There were two partially filled gas tanks that were lying 100 feet from the fire. Having exhausted our means to fight the fire we were forced to withdraw. We did send search parties into the woods to look for survivors.

When additional help and additional water arrived the fire was contained. About 1400 we were able to again approach the wreckage. The firefighters then found the six remains. It was not until 1700 that the wreckage was cool enough to remove any of the bodies.

(b) (5), (b) (6)

(b) (6)

LT(MC) USN

BOARD OF INVESTIGATIONS NOTE:

1. LT (b) (6) reference to "east of the runway" has been determined to have been "west of the runway".

Certified to be a true copy

(b) (6)

LCDR USN

ENCLOSURE 8

STATEMENT OF [redacted], SA, [redacted] Jul 24 1962

I have been in the Navy for about five months.

On 23 July 1962, I stood about my tenth four hour wheels watch at NAS Glynco, Georgia. I was on wheels watch when the plane was making overpasses. On the third overpass that I saw the plane looked like it was landing. On the pass the plane was lower than the other passes. When it was approximately 50 feet from the runway, the engines on the plane started running faster as to make another overpass. A few seconds after the engineswere run faster, the engine on the right side, or the engine on the side nearest the wheel watch, made a sound like a beck-fire and black smoke came streaming out. No parts fell from the plane. Black smoke poured from the top of the engine and the right prop was cutting off and on. He tried to climb but never did until he was clear of the runway. It kept an approximate 20 feet until the end of the runway. The engines were still running wide open but poured more smoke. The plane was off the approach end of runway 7 when it picked up altitude for about 10 seconds, then it went down. As soon as the plane dropped a flame hundreds of feet high went up.

[redacted]

ENCLOSURE 9

STATEMENT OF (b) (6) AC1, (b) (6) Jul 24 1962

I have worked in control towers for about two years. I have held a senior controllers certificate since November of 1961.

I was section leader in the tower at the time of the crash, supervising the approach control and local control positions. Spangle 12 was making a GCA low pass to runway 25. Approach control had two T2V's, one making a UHF ADF approach and one making a T-4 approach. I looked up from the approach control position and saw Spangle 12 a little past mid field; his starboard jet appeared to me to be smoking. Round spurts almost like smoke rings. I grabbed a pair of binoculars to check the aircraft. When Spangle 12 was about over the numbers, west end of the runway, at about 200 feet altitude, I observed #1 engine, port side, being feathered and come to a complete stop. I immediately set off the crash phone. The left wing dipped slightly. I turned toward the crash phone and when I looked back the P2V had disappeared. About 20 to 30 seconds later I observed a ball of fire that appeared to rise about 300 feet or more. The time I first observed this was 1043(R); I saw the fireball at 1045(R).

(b) (6)

ENCLOSURE 10

STATEMENT OF (b) (6) ACC, (b) (6) Jul 24 1962

I am the leading chief of the GCA Unit 32 stationed at NAS Glynco, Georgia. I have worked with GCA units for about six years and as an Aviation Machinist Mate prior to that for about sixteen years. At about 1035(R) on 23 July 1962 I was in the GCA lounge trailer listening to the practice approaches of Spangle 12. I heard Spangle 12 passing over the trailer on GCA wave off with an apparent rough running reciprocating engine. The engine sounded like it was cutting in and out. On hearing the rough running engine, I jumped up and looked out the window facing west and saw that the starboard reciprocating engine was smoking badly (black smoke) with intermittent flames coming out fromaround the cowl flaps. From my vantage point I had a clear, unostructed view of the starboard side of Spangle 12. At this time the aircraft was about 3000 feet from the upwind end of runway 25 at about 200 to 250 feet of altitude. The landing gear was up at this time. Just as the aircraft approached the upwind end of runway 25 a big ball of flame came out of the top of the starboard reciprocating engine and the aircraft veered 10 degrees to the left in a very shallow bank. The aircraft then leveled its wings and descended in a shallow glide. When I saw the smoke coming from the engine I advised the tower to alert the crash crew. From the sound of the aircraft I believe Spangle 12's jet engines were not running as he passed over the GCA trailer.

(b) (6)

ENCLOSURE II

Jul 24 1962

STATEMENT OF [redacted] ACl, [redacted]

I am a final approach controller attached to GCA Unit #32, at NAS Glynco, Georgia. I've been working with GCA for a bout one year and as an air controller for approximately 14 years. At about 1030 local on 23 Jul 1962, I was outside observer at the GCA unit. I had observed all of Spangle 12's previous approaches. At this time, Spangle 12 was on his fourth approach to runway 25. I had visual contact with Spangle 12 from 6 miles on final throughout the approach and wave off. I was looking out the windows on the east side of the lounge trailer and observed the P2V level off as he was notified he was over GCA touchdown and saw his wheels come up and go into the wheel wells. The wave off looked normal and he made an excellent GCA approach. He was out of my sight for about five seconds as he passed over the trailer. Chief [redacted] said his engine sounded rough and I opened the door on the west side of the trailer and stepped out onto the first step. I noticed a slight trail of dark blue or black smoke from the starboard engine which got heavier as he proceeded down the runway. I did not notice any fire until he was about over the upwind end of runway 25. I had a clear view of the starboard side of Spangle 12 after it passed the GCA shack until it went out of sight behind the trees. As Spangle 12 passed over upwind end of runway 25, I noticed a good sized burst of flame come out of the top side of the starboard engine, Just after this the plane made a slight turn to the left with no noticeable bank. Soon after this I heard, "I'm going in, this Spangle 12" over the radio. After Spangle 12 disappeared behind the trees, I saw a big mushroom of dark orange flames (a ball of flame) and black smoke. It went well above the trees.

ENCLOSURE 12

I observed the starboard prop turning very slowly before he went out of sight. The prop did not appear to be spinning at a constant speed but seemed to be intermittently slowing down and speeding up. After hearing another P2V making a waveoff from GCA with jets, I definitely feel that Spangle 12 was not using his jets as he passed over the GCA trailer on wave off.

(b) (6) [redacted]

ENCLOSURE 12

STATEMENT OF (b) (6) AN (b) (6) Jul 25 1962

I am assigned to the crash crew at NAS Glynco, Georgia. I have performed duty as a member of the crash crew forabout a year.

On 23 July I was standing by in an MB-5 crash truck, parked adjacent to the runway, about halfway down the way. I first noticed this P2V about 2000 feet west of the landing end of the runway. I saw that the right engine (recip) was smoking and missing. As he flew by me he looked slower than other P2V passes I had seen. From the sound the aircraft made the jets were not running as he passed by me. I could see as he flew towards me that his jet doors were closed. After he flew past me the amount of smoke increased and came out in a steady stream. After he passed the runway he turned to the left slightly and started going down. Then he seemed to stop turning and kept going down. I saw him go into the trees and then saw a big ball of smoke and flame.

(b) (6)

ENCLOSURE 13

Jul 24 1962

STATEMENT OF [redacted] (b) (6)

On July 23, 1962, around 1030 I heard a noise that sounded like a recip motor missing. I was standing in back of an F3D on the back line at the time, approximately at the 2000 foot marker from the west end of the runway. When I looked up I saw a P2V come over the runway about 200 feet above the runway. The starboard engine was coughing black smoke. I did not see any fire in the engine. The P2V seemed to be holding the altitude that it was at until it started to turn into the port engine, west of the runway. At about the same time the starboard engine quit popping and belching smoke. After the P2V started to turn into the port engine it started to lose altitude. I kept waiting to hear the jet engine light off, but as far as I could tell they never did. As soon as the P2V started to lose altitude while in a left turn, the aircraft leveled out and then disappeared into the trees. I heard no explosion of any kind other than the noise that the motor was making going over the field.

I have been connected with naval aviation since March 26, 1962. I have been flying for nine years in private aircraft, but I am not a pilot.

[redacted] (b) (6)

ENCLOSURE 14

STATEMENT OF (b) (6) AMH3, (b) (6) Jul 24 1962

I was located about 3/4 of the way down the jet line, toward the west end. I heard the P2V as it approached the east end of the runway. I looked up about the time an engine coughed twice. I estimate the aircraft altitude to be 150 - 200 feet high when it was approximately 1000 feet from the approach of runway 25. After coughing two times the engine seemed to smooth out and was running fine, still holding the same altitude. On neither cough did smoke emit from the engine. The aircraft was clean in configuration all the time it was possible for me to see clearly. I noticed no increase in power of either engine. As the aircraft neared the 2000-foot markers on the west end of the runway the starboard engine started coughing rapidly; following each cough a blackish-gray cloud of smoke would come off the engine. At this time I climbed upon the tail of an F3D aircraft for a better view (approximately 12 feet high). I remember hearing the jet engines or engine trying to light off. The engines or engine (jet) may have reached idle RPM but no faster. I don't believe the power on the port engine was ever increased; however, the aircraft was veering slightly to port, with port wing slightly down. About this time he started losing altitude rapidly. I don't recall hearing the starboard engine (recip) cough or seeing it smoke at this time. I couldn't say if it was feathered or secured as the aircraft was too far away to tell. It was still clean in configuration. As the aircraft went down below the trees I could hear it for a second or two then I saw this tremendous ball of flame about 100-150 feet high (est.), followed by smoke. I heard no noise, only flame and smoke. I forgot to mention that the smoke following each cough seemed to come from the top of the engine (starboard recip), and when I saw the aircraft from the front the jet doors were closed.

ENCLOSURE 15

I am a line trouble shooter. Have been in the Navy about two years and two months. I have been working around aircraft about 1½ years.

(b) (6) [redacted]

ENCLOSURE 15

STATEMENT OF (b) (6) CAPT, (b) (6) 7332 USMC Jul 25 1962

I am a naval aviator with about 2200 hours flight experience, assigned to NATTC at NAS Glynco.

At approximately 1040 hours on 23 July 1962 I was preflighting an F3D aircraft for a planned local flight out of NAS Glynco, Georgia. While under the wing of the aircraft I heard a reciprocal engine malfunctioning, missing rather than a complete power failure. The aircraft sounded like it was executing a low pass over the field. AEAN BAYER, plane captain for my aircraft, called to me saying the aircraft was in trouble and was "going in". I ran to the rear of my aircraft to see the troubled aircraft. I saw a P2V aircraft at approximately 300 feet in level flight proceeding to the field boundaries on a heading of about 250° magnetic. The aircraft held altitude and level flight for several seconds and then began to settle. There were no signs of exterior trouble, that is smoke, flying parts, trailing landing gear, etc., from the first time I saw the P2V until the last time I saw it. The P2V continued to settle holding level flight. The attitude was good for ditching allthe way until disappearing behind the line of trees to the west of the field. As the P2V settled out of sight, I heard the jet engines, sounded like F3D with both engines, turning up at maximum RPM. I do not recall hearing the jet engines operating on the P2V passed over the field. I did not hear the jet engines start up. I did not see either reciprocating engine in a feathered condition as the P2V was too far away to notice the props. It did appear that both props were turning. The P2V settled out of sight and a few seconds later a black cloud roseabove the trees.

(b) (6)

ENCLOSURE 16

STATEMENT OF (b) (6) ACC, (b) (6) Jul 24 1962

I have been an air controller for twelve years. On the morning of 23 July 1962 I was working in the tower at NAS Glynco, Georgia.

At approximately 1043 (R) Spangle 12 made a low pass on runway 25 on GCA frequency. His altitude appeared to be about 200 feet. About 6000 feet down the runway (25) I observed puffs of black smoke coming from the starboard side of the aircraft. The puffs continued at regular intervals and appeared from the jet on the starboard side. The aircraft appeared to climb to three or four hundred feet, turn slightly left, left wing down slightly and begin to settle. His glide was very shallow and looked as if he would recover. Crash circuit was opened and reported as a crash while the aircraft was approximately 100 feet above the tree line. He disappeared behind the tree line to the west edge of the field. A large ball of fire was observed, followed by a column of black smoke. All crash equipment was dispatched immediately.

(b) (6)

ENCLOSURE 17

PART VIII - THE ANALYSIS

GENERAL

The aircraft was on an authorized flight with a qualified crew and was being conducted as scheduled. The aircraft had been properly preflighted. The pilot accepted the aircraft with known discrepancies which the board feels did not affect safety of flight. The weather as reported in enclosure 17, was not a contributing factor. When the aircraft taxied at NAS Jacksonville, LT McHUGH, the PPC, was observed by line personnel to be in the right seat. All factors having a bearing on the accident will be discussed under the headings of material, personnel and supervisory.

MATERIAL

The only unincorporated Aircraft Service Changes or Engine Bulletins which could have had any bearing on the accident were: (1) ASC 861, installation of Chip Detector warning lights in the cockpit, (2) ASC 877, installation of dual 30 KVA constant frequency power. The warning lights, if installed, possibly could have given the pilot some forewarning of engine malfunction. The dual 30 KVA electrical system would have resulted in a lighter electrical load on the main DC bus at the time of the emergency, thus providing the necessary power to crank start a jet engine without taking the tire to reduce the electrical load by securing any of the inverters. The fact that the final UHF transmission of the aircraft was as strong as those received prior to the emergency precludes complete loss of electrical power to the main D.C. bus being a contributing factor.

The outstanding discrepancy concerning the propeller low pitch lights could not have been a contributing factor. The pilot was able to set both propellers at full low pitch. This is evidenced by the fact that the port prop governor was found set at full increase RPM and that the starboard propeller dome was mechanically set at the low pitch stops.

The reciprocating engines and limited accessories which were sent to O&R for disassembly and inspection were in such poor condition that the report can be accepted as completely valid only with regards to the remaining components of the power section of the engines.

The preliminary DIR reveals no evidence of malfunction of the starboard reciprocating engine. However, reliable witnesses, being in position to observe the starboard engine, produced strong evidence of a malfunction associated with a rough running engine, smoke and fire. This evidence is not inconsistent with the preliminary DIR in that the difficulty, if confined to the ignition or induction systems, would not have been revealed in the disassembly and inspection.

Based upon witnesses' observations and the preliminary DIR indicating no significant discrepancies, it is concluded that the port engine was capable of being operated normally prior to feathering. The burned valves from the port engine as reported in the preliminary DIR subsequently have been determined by laboratory analysis to have been burned by fire associated with the crash.

It is concluded from witnesses' statements and the path of the aircraft through the trees, which average a height of 80 feet, that the aircraft was under control of the pilot and that malfunction of control surfaces is not a contributing factor.

ENCLOSURE 18

PERSONNEL

At a low altitude, the likelihood of recovering from a loss of power on one reciprocating engine, with the jet doors closed, would depend primarily on the single engine capability of the aircraft. The aircraft weight at the time of the crash, as estimated by members of the board, was 64,746 pounds. At this weight, using military rated power on the good reciprocating engine, the aircraft had single engine operating capability. At normal airspeeds for the low pass phase of the approach and at an altitude of approximately 250 feet, a successful recovery from the loss of power of one of the reciprocating engines would have been possible. The NATOPS Manual recommends maintaining at least 141 knots CAS at 65,000 pounds for single engine climb. It is probable that the aircraft was at or very near this airspeed at the time of the emergency. Although the aircraft had the capability of single engine flight, rapid analysis and positive action would be required on the part of the pilot.

All available evidence positively establishes the fact that the port propeller was feathered. In order to determine where the propeller was feathered, an attempt was made to graphically relate sounds on the tape recording with witness observation and the aircraft's progress over the ground (enclosure 4). An average ground speed of 130 knots (217 feet per second) was assumed. This assumption is based on the fact that members of the board calculated, from the tape recording, an average ground speed of 127 knots on GCA final approach. This graphic analysis places the position of the aircraft at the time of port propeller feathering. This position precludes the likelihood of feathering the propeller in connection with normal ditching procedures.

With no evidence of port engine malfunction, the reason for feathering this engine is undetermined. The most probable reason is either incorrect analysis of the existing emergency or inadvertent pushing of the wrong feathering button. Either of these mistakes could be the result of haste on the part of the pilot in connection with the rapid action required in handling an engine emergency, involving fire, at a low altitude.

With the port engine feathered and some undetermined loss of power on the starboard engine, the pilot was in dire need of power from the jet engines. If he had been following Standard Operating Procedures the jet doors would have been closed. The emergency must have been recognized and jet doors opened shortly after passing over GCA touchdown point. The NATOPS Manual states that at 140 Kts IAS, 33 seconds would be required to windmill the jets to the necessary 8% to ignite. Approximately 15 additional seconds would be required for ignition and acceleration to 100%. Therefore, immediate action upon first indication of engine malfunction would have permitted 100% power on both jets shortly after the port engine was feathered. However, the witnesses' observations, particularly that of Captain Perkins, places the position of the aircraft at the time of obtaining jet power well beyond the point of feathering. With the aircraft losing airspeed and altitude at this point very little time was available for the jets to develop 100% power. If the aircraft was on the backside of the power curve at this point, recovery at such a low altitude would have been improbable even though the jets were approaching 100%.

The port fuel tank selector valve was found in the closed position, thus denying a source of fuel for the port jet. In order for the port

ENCLOSURE 18

jet to be operating at a speed somewhere between idle and normal at impact, as indicated by the DIR, this valve must have been closed immediately prior to impact or as a result of impact. The same conclusion is made for the oil and hydraulic firewall shut off valve to the starboard reciprocating engine (enclosure 10) since the preliminary DIR reveals no evidence of oil starvation in this engine and it was in fact developing some power on impact. The unusual fuel system mode of operation found after the crash has therefore been determined to have been a result of either a last minute preparation for the crash or a result of impact. There are no indications of fuel panel mismanagement.

Another possible personnel contributing factor is the use of flaps. Standard Operation Procedure call for 20 degrees of flaps on GCA final, and for low passes that flaps be raised only upon reaching an altitude of 300 feet. Time distances checks of the controller's transmissions reveal an average ground speed of 127 knots on final approach leg. This speed is consistent with a 20 degree flap setting. The flap drive screw jacks established the fact that flaps were up at the time of impact. When the flaps were raised is undetermined. Although witnesses did not observe any changes of attitude associated with raising the flaps, it is possible that flaps were raised in small increments as the aircraft proceeded down the runway. Another possibility is that flaps were raised after the feathering of the port propeller in a desperate attempt to gain airspeed by reducing drag. Such action could have resulted in a sink rate sufficient, at this low altitude, to cause collision with the trees.

SUPERVISORY

Past Standard Operating Procedures and the NATOPS Manual do not require the use of jets other than on approaches where the weather is below 500 feet ceiling and 1 mile visibility. If the use of jets in either the idle or standby position for practice GCA low passes had been a standard operating procedure, it is quite obvious that less pressure for hasty action would have been exerted upon the pilot in this particular emergency.

COMMENTS

LT McHugh as P.P.C. and LT Broughton as student pilot were both aeronautically adapted, physically qualified and in an up-status at the time of the accident. LT Broughton was current in physical examination, low pressure chamber, night vision, and swimming. LT McHugh was current in physical examination and night vision.

There were no socio-psychological factors evident in this aircraft accident. Both pilots and plane captain had a normal intake of food and adequate rest on the day preceding the accident. The chief contributing factors in this accident are:

1. Material. It is a definite fact that difficulty was encountered with the starboard reciprocating engine. The DIR was unable to confirm a definite cause but from witnesses' statements we can conclude that it was emitting large amounts of smoke and "running rough" and two witnesses who had the best view of the right side of the aircraft state that they "saw flames coming over the top of the starboard engine." Shortly after the onset of the "rough running" starboard engine (approximately 18 seconds) the port engine was feathered and the plane was unable to maintain altitude.

2. Personnel. [redacted] (b) (5)

The plane had single engine operating capability and by advancing the throttle of the port reciprocating engine and keeping the plane in controlled flight, he could have maintained altitude. From the investigation of the board there are two principal theories concerning what caused the person or persons to make the fatal mistake of feathering the wrong engine. Either a faulty analysis was made with intentional feathering of the port engine or he used correct analysis and inadvertently pushed the wrong button. Strong evidence is given to the latter because:

A. The feathering buttons are located side by side on the throttle quadrant 3/8 inches apart. No great physical error would be required to push the wrong one in a critical situation as did exist in this emergency.

ENCLOSURE 19

B. [redacted]

(b) (5)

From information in the DIR and witnesses' statements it is known that both jet engines were developing power before crashing. For the jets to have averted the accident the lighting sequence would have to have been started earlier because by the time 100% power was reached he was most likely on the back side of the power curve. Also there is some possibility if flaps were raised at the time of developing 100% power from the jets, the ensuing loss of altitude due to flap raising could have been the difference in hitting or missing the trees.

As a result of tremendous sudden deceleration forces and fire immediately following the crash it was impossible to correlate autopsy reports with definite positions of crewmen in the aircraft and safety and survivor equipment worn. From the wreckage distribution diagram it can be concluded that the crewmen were in the following positions immediately prior to crashing: McHugh, right or left pilot seat; Broughton, right or left pilot seat; Anderson, in his ditching station behind the 186 panel; Moseler, strapped in on one of the flight deck seats; Cawthon, radio compartment; Willis, radio compartment. The only piece of survival equipment found was an APH-5 helmet which was believed to have been thrown clear and was not involved in the fire.

ENCLOSURE 19

RECOMMENDATIONS

1. That Standard Operating Procedures be revised to require jets be placed in standby or idle when practicing instrument low approaches which do not include landings.

2. The feathering buttons be separated by a distance of from one to two inches.

3. More and continued emphasis be placed on emergency procedures at the squadron level in order to maintain a high level of proficiency.

ENCLOSURE 19

PART IX - COMMENTS

The primary cause of the accident was personnel error in that the wrong propeller was feathered. This action could have been physically accomplished by either of the pilots or the plane captain.

In addition to the above, the following contributing factors were present in the accident.

(1) There was an undetermined malfunction of the starboard reciprocating engine which was accompanied by fire. This is significant in that it occurred at a low altitude whereby rapid action was required on the part of the pilot. Partial loss of power on this engine, in itself, was not significantally critical.

(2) The Standard Operating Procedures do not require the use of jet engines in standby or idle while making practice GCA approaches to low passes. Having jets readily available would have required less action on the part of the pilot during the emergency thereby reducing the pressure for hasty action.

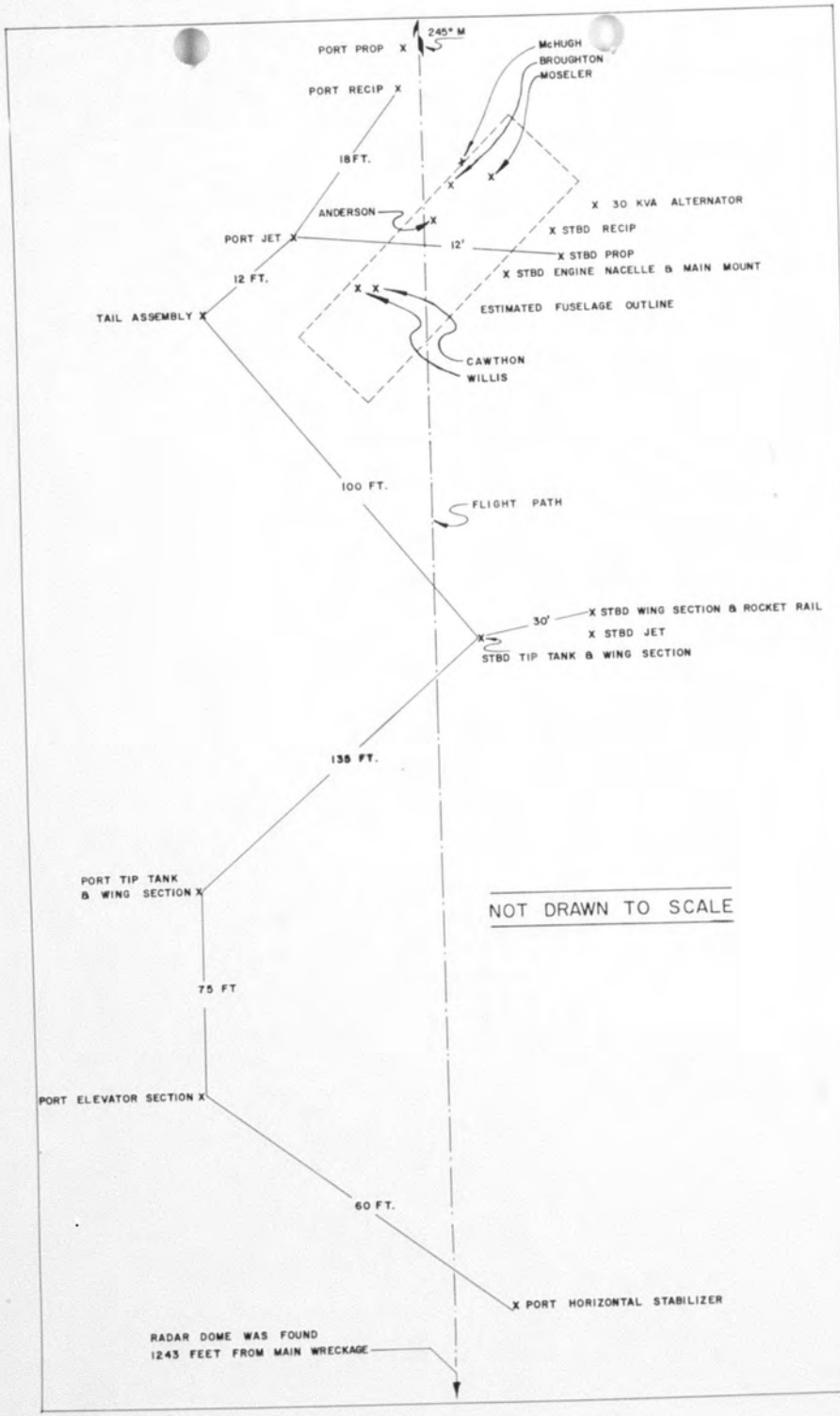
(3) The possible untimely raising of flaps just prior to collision with the trees could have been critical in itself, due to a resulting loss of altitude.

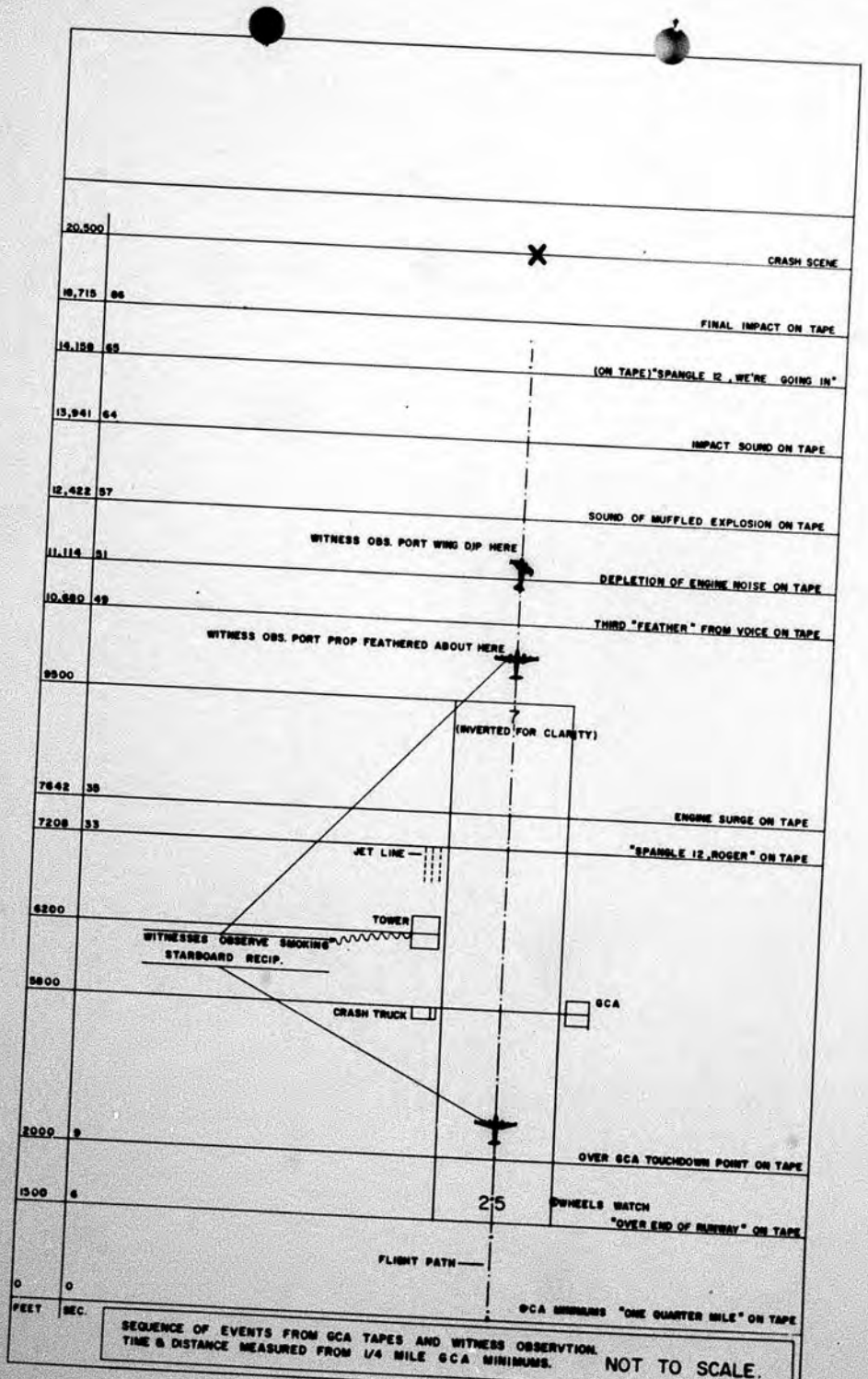
ENCLOSURE 20

PART X - RECOMMENDATION

It is recommended that Standard Operating Procedures be revised to require jets being placed in standby or idle when practicing instrument low approaches which do not involve a landing.

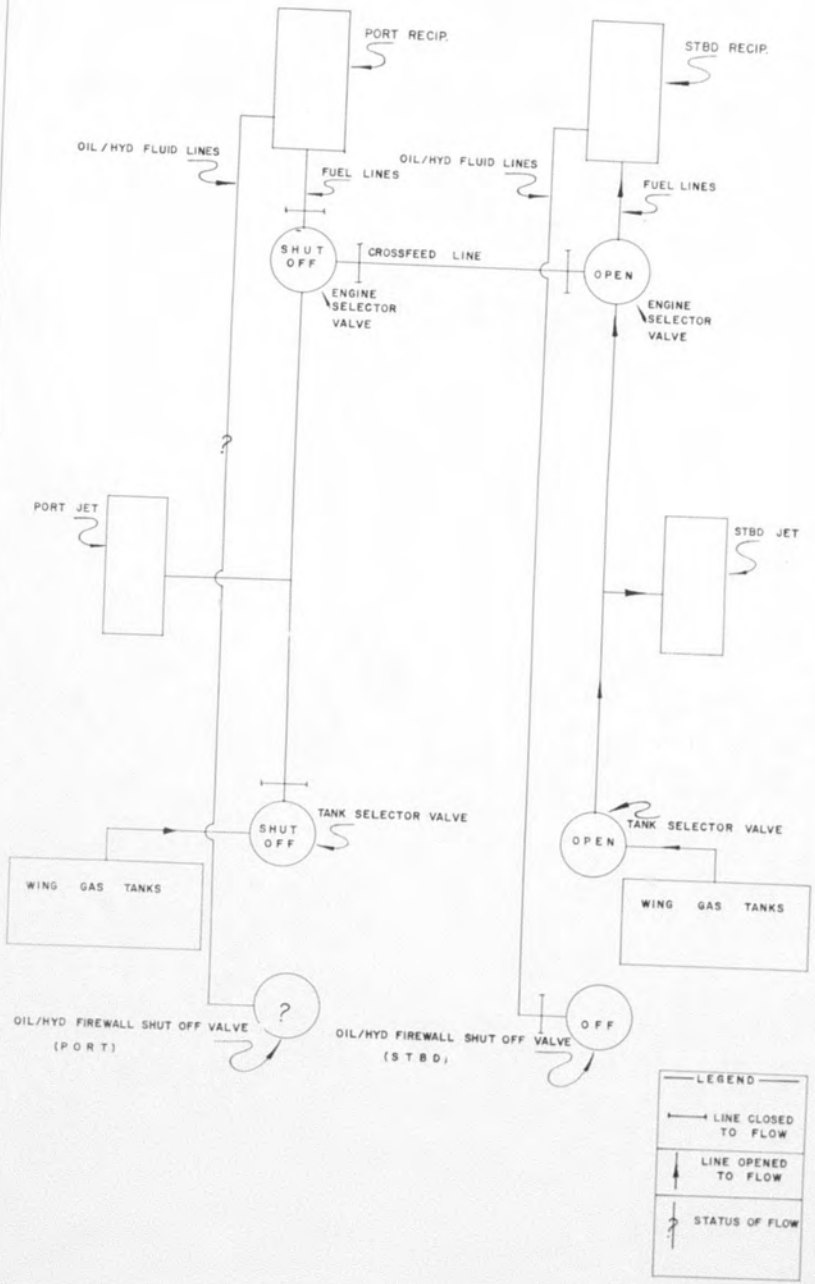
ENCLOSURE 20

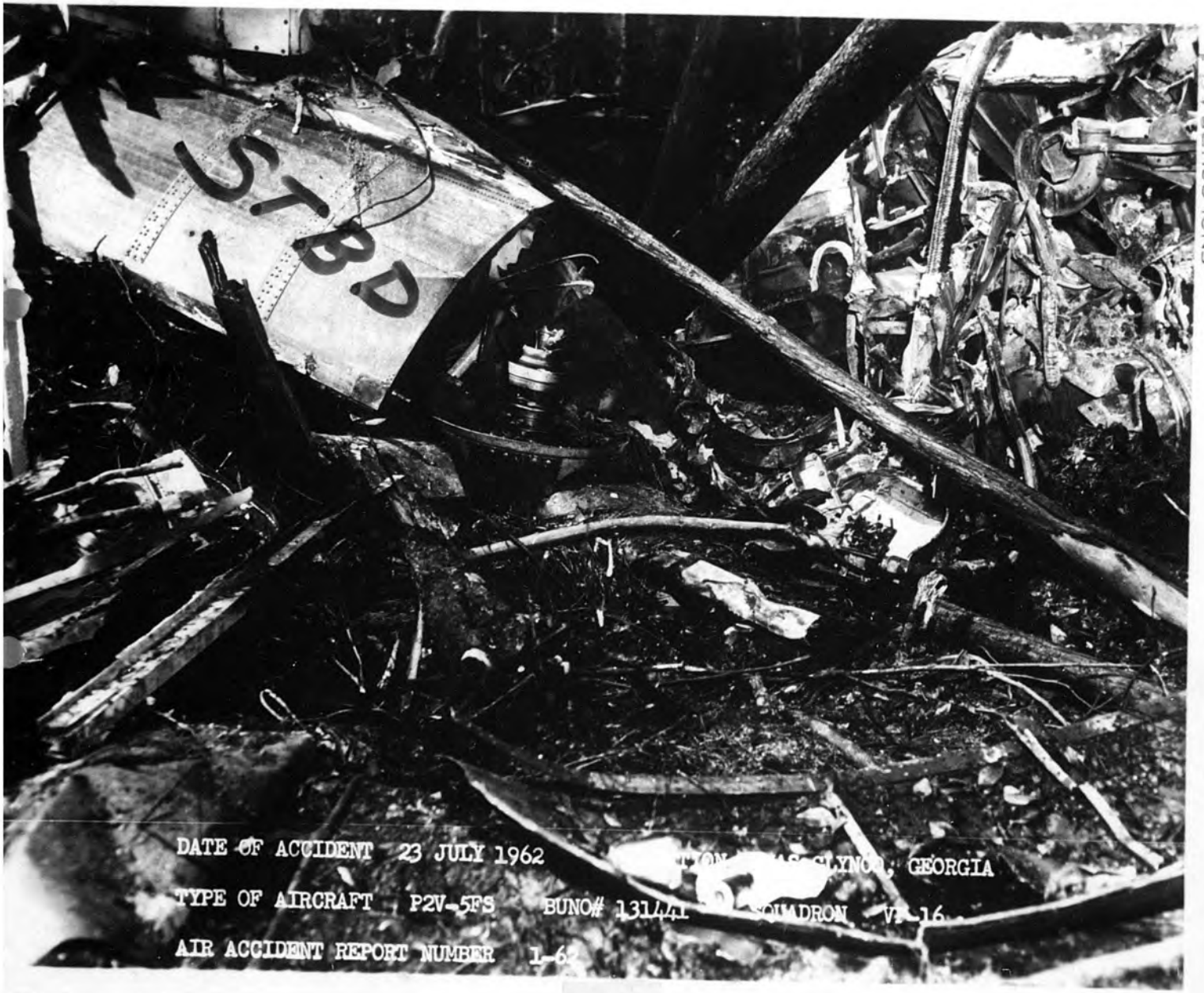

245° M
PORT PROP X
PORT RECIP X
18FT.
McHUGH
BROUGHTON
MOSELER
X 30 KVA ALTERNATOR
ANDERSON
X STBD RECIP
PORT JET X
12'
X STBD PROP
X STBD ENGINE NACELLE & MAIN MOUNT
12 FT.
TAIL ASSEMBLY X
ESTIMATED FUSELAGE OUTLINE
CAWTHON
WILLIS
100 FT.
FLIGHT PATH
30'
X STBD WING SECTION & ROCKET RAIL
X STBD JET
STBD TIP TANK & WING SECTION
135 FT.
PORT TIP TANK
& WING SECTION X
NOT DRAWN TO SCALE
75 FT
PORT ELEVATOR SECTION X
60 FT.
X PORT HORIZONTAL STABILIZER
RADAR DOME WAS FOUND
1243 FEET FROM MAIN WRECKAGE


20,500
CRASH SCENE
18,715 86
FINAL IMPACT ON TAPE
14,159 65
(ON TAPE) "SPANGLE 12, WE'RE GOING IN"
13,941 64
IMPACT SOUND ON TAPE
12,422 57
SOUND OF MUFFLED EXPLOSION ON TAPE
WITNESS OBS. PORT WING DIP HERE
11,114 51
DEPLETION OF ENGINE NOISE ON TAPE
10,280 49
THIRD "FEATHER" FROM VOICE ON TAPE
WITNESS OBS. PORT PROP FEATHERED ABOUT HERE
9500
(INVERTED FOR CLARITY)
7642 38
ENGINE SURGE ON TAPE
7208 33
"SPANGLE 12, ROGER" ON TAPE
JET LINE
6200
TOWER
WITNESSES OBSERVE SMOKING STARBOARD RECIP.
5800
CRASH TRUCK
GCA
2000 9
OVER GCA TOUCHDOWN POINT ON TAPE
1500 6
2:5
WHEELS WATCH
"OVER END OF RUNWAY" ON TAPE
FLIGHT PATH
0 0
GCA MINIMUMS "ONE QUARTER MILE" ON TAPE
FEET SEC.
SEQUENCE OF EVENTS FROM GCA TAPES AND WITNESS OBSERVTION.
TIME & DISTANCE MEASURED FROM 1/4 MILE GCA MINIMUMS.
NOT TO SCALE.

FUEL SYSTEM SET UP

RECONSTRUCTED FROM WRECKAGE





DATE OF ACCIDENT 23 JULY 1962 [illegible] GLYNCO, GEORGIA

TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 [illegible] VP-16

AIR ACCIDENT REPORT NUMBER 1-62

ENCLOSURE (7)

ENCL (7)


DATE OF ACCIDENT 23 JULY 1962 LOCATION NAS GLYNCO, GEORGIA
TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 SQUADRON VP-16
AIR ACCIDENT REPORT NUMBER 1-62

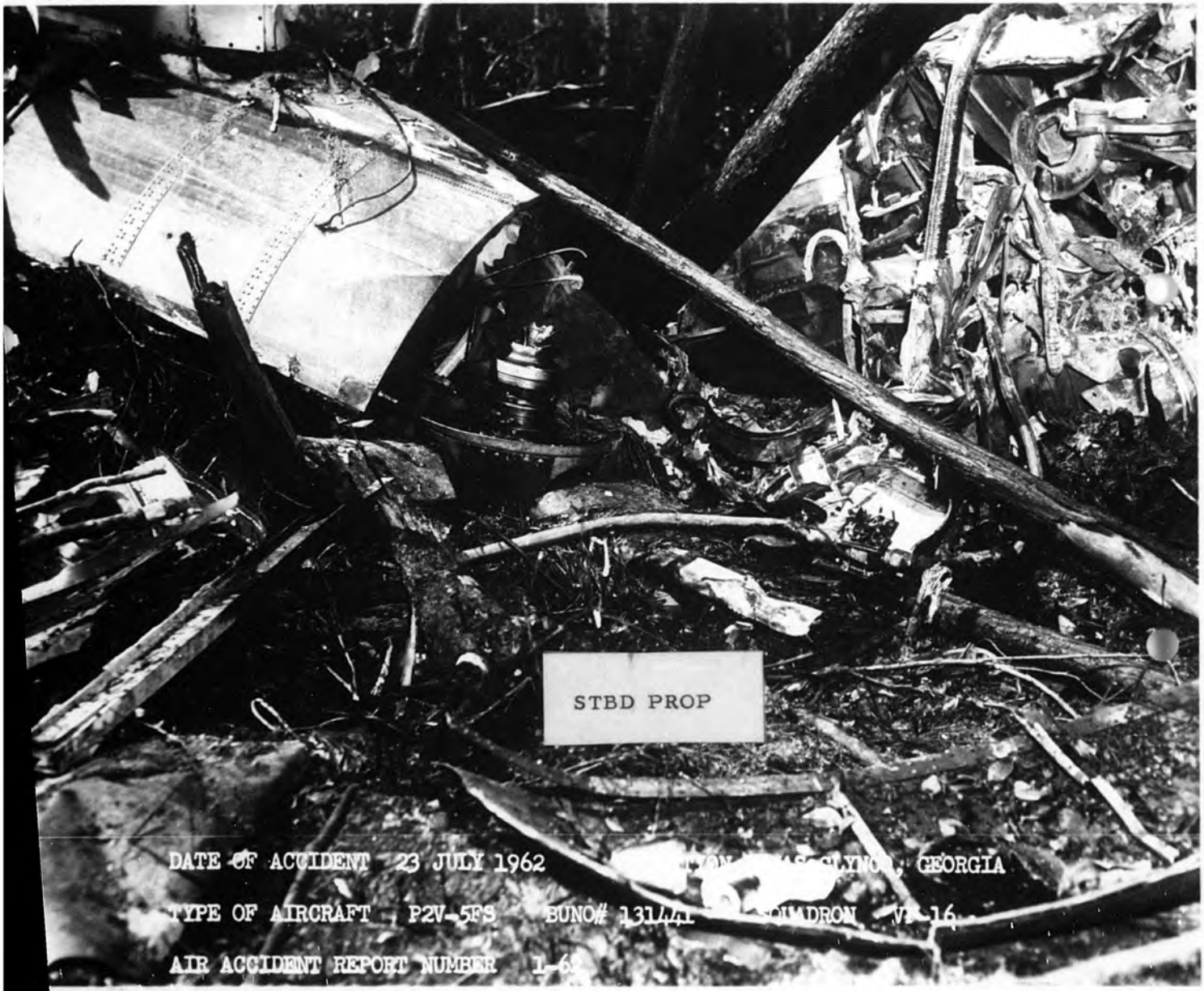
DATE OF ACCIDENT 23 JULY 1962 LOCATION NAS GLYNCO, GEORGIA

TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 SQUADRON VP-16

AIR ACCIDENT REPORT NUMBER 1-62


DATE OF ACCIDENT 23 JULY 1962 LOCATION NAS GLYNCO, GEORGIA
TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 SQUADRON VP-16
AIR ACCIDENT REPORT NUMBER 1-62


DATE OF ACCIDENT 23 JULY 1962 LOCATION NAS GLYNCO, GEORGIA
TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 SQUADRON VP-16
AIR ACCIDENT REPORT NUMBER 1-62


STBD PROP
DATE OF ACCIDENT 23 JULY 1962
GEORGIA
TYPE OF AIRCRAFT P2V-5FS BUNO# 131444
VP-16
AIR ACCIDENT REPORT NUMBER

DATE OF ACCIDENT 23 JULY 1962 LOCAT GLYNCO, GEORGIA

TYPE OF AIRCRAFT P2V-5FS BUNO# 131441 SQUADRON VP-16

AIR ACCIDENT REPORT NUMBER 1-62